Art
Architect.
S.

The University of Chicago
FOUNDED BY JOHN D. ROCKEFELLER

3 1761 09615137 8

SOLOMON'S TEMPLE IN THE LIGHT OF OTHER ORIENTAL TEMPLES

LIBRARY
UNIVERSITY OF TORONTO.
1903

A DISSERTATION

SUBMITTED TO THE FACULTY OF THE GRADUATE DIVINITY SCHOOL, IN CANDIDACY FOR THE DEGREE OF DOCTOR OF PHILOSOPHY

(DEPARTMENT OF OLD TESTAMENT LITERATURE AND EXEGESIS)

BY
EMANUEL SCHMIDT

CHICAGO
The University of Chicago Press
1902

The University of Chicago
FOUNDED BY JOHN D. ROCKEFELLER

SOLOMON'S TEMPLE IN THE LIGHT OF OTHER ORIENTAL TEMPLES

A DISSERTATION

SUBMITTED TO THE FACULTY OF THE GRADUATE DIVINITY SCHOOL, IN CANDIDACY FOR THE DEGREE OF DOCTOR OF PHILOSOPHY

(DEPARTMENT OF OLD TESTAMENT LITERATURE AND EXEGESIS)

BY
EMANUEL SCHMIDT

CHICAGO
The University of Chicago Press
1902

Copyright 1902
By Emanuel Schmidt

To my Brother

PROFESSOR NATHANIEL SCHMIDT

OF CORNELL UNIVERSITY

CONTENTS.

PREFACE - - - - - - - - - - - - - - 5

INTRODUCTION - - - - - - - - - - - - - 9

1. Time of Building - - - - - - - - - - 9
2. The Purpose of the Building - - - - - - - - 9
3. How Much Was Included in the Hêkâl? - - - - - - 10
4. The Names of the Oriental Temples - - - - - - 11

CHAPTER I. CHARACTERISTIC FEATURES OF ORIENTAL TEMPLES.

1. Assyrio-Babylonian Temples - - - - - - - - 15
2. Egyptian Temples - - - - - - - - - - 20
3. Phœnician Temples - - - - - - - - - - 24
4. Temple in Cyprus - - - - - - - - - - 26

CHAPTER II. PREPARATIONS FOR SOLOMON'S TEMPLE.

1. David's Relation to the Temple Building - - - - - - 29
2. Solomon's Contract with Hiram of Tyre - - - - - - 29
3. The Material Used - - - - - - - - - - 30
4. Transportation of the Material - - - - - - - - 30
5. Preparation of the Temple Area - - - - - - - 32
6. The Working Force - - - - - - - - - - 32

CHAPTER III. THE PLAN OF THE BUILDING.

1. The Surrounding Walls - - - - - - - - - 34
2. The People's Court - - - - - - - - - - 34
3. The Priests' Court - - - - - - - - - - 35
4. Jachin and Boaz - - - - - - - - - - 36
5. Similar Pillars in Other Temples - - - - - - - 38
6. The Vestibule - - - - - - - - - - - 40
7. The Doors - - - - - - - - - - - - 40
8. The Holy Place - - - - - - - - - - 41
9. The Windows - - - - - - - - - - - 41
10. The Holy of Holies - - - - - - - - - - 43
11. The Surrounding Chambers - - - - - - - - 44
12. Was There a Grove around the Temple? - - - - - - 46

CHAPTER IV. FURNITURE AND DECORATIONS OF THE TEMPLE.

1. The Altars - - - - - - - - - - - - 47
2. The Molten Sea - - - - - - - - - - - 49

3. The Lavers - - - - - - - - - - - - 51
4. The Tables - - - - - - - - - - - - 52
5. The Candlesticks - - - - - - - - - - - 52
6. The Ark - - - - - - - - - - - - 53
7. The Cherubim - - - - - - - - - - - - 54
8. The Decorations - - - - - - - - - - - 56

CHAPTER V. THE GROWTH OF THE ORIENTAL TEMPLE.
1. The Mountain Home of the God - - - - - - - 58
2. The God's Home among Men - - - - - - - - 59
3. The Terrace Temple, a Combination of Both - - - - - 59

BIBLIOGRAPHY - - - - - - - - - - - - - 62

APPENDIX - - - - - - - - - - - - - - 64

PREFACE.

ALREADY at the dawn of history man had a conception of superior beings, whom he worshiped as gods. Whatever may have been the process of development by which he had reached that conception, however it may vary in different races and nationalities, one thing is certain, that at this early stage he had already begun to centralize his worship in certain sacred places, as on high mountain peaks, near altars formed by the native rock, under certain shadowy trees, near sparkling springs of water. Although these gods were conceived of as more powerful, more cunning, and more wise than men, yet in traits of character, and sometimes even in appearances, they were indeed like men. Soon there dawned upon the mind of man the idea that just as he himself lived in a commodious house, so also ought his god to have a dwelling, whither offerings might be brought, and where the will of the oracle might be proclaimed. Hence there grew up around these sacred places small shrines, which in a later time developed into magnificent temples.

While this process of evolution has been going on independently within each nation, yet through the continuous contact of trade and the violent influence of war the nations learned a great deal from each other. A most striking example of such an influence is Syria, where for centuries two civilizations vied with each other for supremacy, which resulted in a strange mixture of Assyrio-Babylonian and Egyptian ideas expressed in her art and architecture.

It is the purpose of this thesis merely to treat of the art and architecture of the temple, and not to describe the play of human life around the sacred shrine, as manifested in its elaborate system of priests and sacrifices, solemn processions, and feasts of joy.

In the middle of the nineteenth century, when the mysterious signs of the temple walls of Egypt began to be understood, and successful excavations brought to light a clearer idea of the temple plan, it was quite natural that a deep interest should be aroused in a comparative study of the Egyptian temples and that of Solomon in Jerusalem. Thus appeared the magnificent volumes of De Saulcy and Vogüé, advocating most earnestly the Egyptian plan of Solomon's Temple. Later on, Assyria and Babylonia proved a very interesting and fruitful

field for excavations, bringing forth abundant material for a safe reconstruction of their temples. At once the pendulum began to swing the other way.

Place's and Layard's discoveries in Nineveh, and Peters's and Hilprecht's in Nippur, have surely shown that the Assyrio-Babylonian temple had a great similarity of arrangement to the Jerusalem temple. This view is most ably set forth in Jastrow's great work on Babylonian and Assyrian religion. But Renan's work in Phœnicia and Cesnola's in Cyprus have shown the necessity of studying other Syrian temples before a decision can be made as to the origin of the temple plan. Thus we may learn that, while the art and architecture of the temple may show an Egyptian as well as an Assyrio-Babylonian influence, yet we may observe certain changes caused by the genius of a different people in a peculiar adaptation to new local conditions.

Certain kindred subjects ought to be investigated in connection with a study of the temple, but they can only be mentioned here.

1. *The relation of the Tabernacle to Solomon's Temple.* — It is clear that in the accounts given of both there is a close similarity of plan. Was the temple built after the pattern of the tabernacle, or is it possible that the late historian formed his idea of the tabernacle and the worship in the wilderness from his observation of Solomon's Temple, just as it formed the basis of Ezekiel's ideal temple?

2. *The subsequent history of the Temple.* — In Egypt we can trace the growth of the sanctuaries from age to age. One dynasty tried to surpass another in increasing the grandeur of the temples. The nature of the Egyptian temple made this a very easy task, for with the original temple as a nucleus it was only necessary to add more chambers, and then complete the rectangular shape with its courts and pylons. Was there a similar growth in the case of the Jerusalem temple? The restorations of the temple and the rebuilding by Herod would be topics of great interest.

3. *A comparative study of Oriental feasts and priesthood.* — All passages which may deal with these topics ought to be collected, in order to ascertain, as far as it is possible, the names and the time of the Oriental feasts, the order of ceremonies at different occasions, the system of priesthood, and the points in common that might be discovered at the various shrines.

4. *A comparative study of Oriental palaces.* — Royal palaces and great temples are closely related in the Orient. Ikh-en-Aten built a new temple in Tell-el-Amarna, but he also erected a splendid palace

there. Likewise, Solomon built a temple and a palace in Jerusalem. Should the temple be regarded as a part of the palace? Is there a similarity of plan in the palaces of different Oriental countries, or had each country its own style of architecture? It is to be hoped that this study of Solomon's Temple may lead to a clearer understanding of the appearance of that ancient shrine and arouse an interest in the development of these early attempts to build a home for Him "who dwelleth not in temples made with hands," but whom all may worship anywhere "in spirit and in truth."

EMANUEL SCHMIDT.

UNIVERSITY OF CHICAGO.

INTRODUCTION.

1. TIME OF BUILDING.

THE most significant results of Solomon's reign were his elaborate building achievements: the temple and the palace. Extensive preparations had already in David's time been made for the building of a House of God, but it was left for Solomon to carry out the plan, which was to strengthen the capital and make it a religious and social as well as a political center. The work began in the month of Zif,[1] in the fourth year of Solomon's reign.[2] Placing the reign of Solomon to 977–937 B. C.,[3] the temple-building must have begun in 973 B. C. The LXX, however, states that it took "three years to prepare the stone and the timber."[4] As it is quite likely that these three years preceded the date mentioned above, this undertaking must have been the very first act of the new ruler. The time is further fixed to the 480th year after the Exodus,[5] but nothing is gained by that, for even though the Exodus might be fixed by external evidences, there remains the chronologically uncertain period of the Judges. The LXX has the 440th year, and Josephus the 592d year, after Exodus.[6] The latter also places this event in the 11th year of the reign of Hiram of Tyre.[7] According to 1 Kings 6: 38 the work was completed in the month of Bul,[8] in the eleventh year of Solomon's reign. It took about seven years to erect it. The entire work was therefore completed in about ten years.

2. THE PURPOSE OF THE BUILDING.

The motives which led to the building of great shrines in the Orient were not only religious, but also political. Among the ancient nations there was a close connection between wars of conquest and erection of temples. A solemn contract was entered upon between the king and his god. The deity was to grant victories to the warrior-king,

[1] Josephus calls this month Ἰάρ, *Ant.*, VIII: iii: 1. This was the second month of the sacred year.

[2] 1 Kings 6: 1, 37. The Chronicler further adds that it was on the second day of the month. 2 Chron. 3: 2.

[3] KENT AND GOODSPEED, *Chart of Biblical History*, Chicago, 1895.

[4] LXX, 3 Kings 5: 17. [5] 1 Kings 6: 1, 37; 2 Chron. 3: 2.

[6] Josephus also states that it occurred in "the 1022d year after Abraham's coming out of Mesopotamia into Canaan, the 1440th year after the deluge, and the 3102d year from Adam." *Ant.*, VIII: iii: 1.

[7] JOSEPHUS, *Ant.*, VIII: iii: 1. [8] That is, the eighth month.

the latter was to show his gratitude by either building or adorning "the house of god" by means of the spoils of war. This thought stands out prominently, not only in the text, but also in the arrangement and content of Seti's inscription on the walls of Karnak.[1] So also in Israel. Yahweh had granted to David many great victories and the extension of the kingdom's boundaries. In return David made preparations for the erection of a magnificent temple. Yet, before he did so, he made his capital secure by the fortifications on Mount Zion. Solomon's chief aim was to further fortify Jerusalem by establishing there a national sanctuary, worthy of any nation's pride, and glorious enough to hold a prominent place among the temples of antiquity. Such a shrine would "strengthen the bond of union among the Hebrew tribes."[2] Only a few centuries later this purpose of the temple was so strongly felt that a special code of laws was written commanding the centralization of the cult in Jerusalem.[3] The temple was not primarily intended to be a house of worship for the masses, for the priests only were allowed to enter the Holy Place to perform their duties, and the high-priest alone could enter the Holy of Holies, but the courts were for the people, who were especially interested in the ritual and ceremonial worship at the great festivals. The purpose of the building was therefore (1) a political and social unification of the tribes, (2) a centralization of the cult for the strengthening of the nation.

3. HOW MUCH WAS INCLUDED IN THE HÊKÂL?

The sacred grounds in Jerusalem, like those of Egypt and Assyria,[4] have witnessed numerous transformations in the course of history. One shrine has taken the place of another, and each change has made it more difficult to determine how much was included in the earlier sanctuaries. Within the Assyrian temple ground there was, first of all, the zikkurat, the high tower, and then various smaller shrines and large courts in which the people were allowed to congregate, bringing their sacrifices to the altars at the foot of the zikkurat.

In Egypt it is easier to see what was included within the temple area, because of the ruins that are still standing. The Egyptian temple consisted of pylons, colonnades, courts and halls, chambers of

[1] Both Assyrian and Egyptian inscriptions furnish us evidence corroborating this thought.

[2] HURLBUT, in *Old and New Testament Student*, Vol. VII, p. 125.

[3] Deut. 12:8–14; 16:16, etc.

[4] Inscription in the temple of Rameses III. at Karnak. See also ERMAN, *Life in Ancient Egypt*, p. 279; and JASTROW, *Religion of Babylonia and Assyria*, p. 621.

various kinds, storehouses and priestly dwellings, and, most significant of all, a temple lake and a garden.[1]

The real question in regard to Solomon's Temple is whether or not it should be regarded as a part of the palatial buildings. Stade[2] holds to the view that the palace of Solomon stood in close connection with the temple, just below it, and thus includes it within the harâm wall. Where Solomon's Millô was situated is uncertain, but Winckler[3] has proven conclusively that it was a separate structure in a different part of the city, presumably in the City of David.

4. THE NAMES OF THE ORIENTAL TEMPLES.

The names of the Oriental temples have in common the conception of a "dwelling place for the god."[4] Just as the king had his palace to live in, so the god whom he worshiped must also have his.[5] It is an early notion in almost all countries of antiquity that the gods dwell on high mountain tops. This found expression in a large number of Assyrian and Babylonian names of the zikkurat: *E-kua*, "the mountain house," at Nippur; *E-kharsag*, the same in Ur; further modification of the idea of a "mountain house" is found in the names: *E-kharsag-kur-kura*, "the house of the mountains of all lands," in honor of Ramman in Asshur, and *E-kharsag-ella*, "the house of the glorious mountain," dedicated to Gula in Babylon. In the former of these there is a notion of a universal rule of the god. It points to a time when Asshur was the mistress of the world. The idea of exaltedness and glory is indicated in *E-sagila*, "the lofty house," in Babylon, and *E-babbara*, "the brilliant house," the temple of Shamash at Sippar. Just as the mountain is firmly rooted in the bosom of the earth, while it boldly stretches its head toward the skies, so must also the zikkurat have a firm foundation, and still reach upward toward the heavens. This thought has found expression in some of the temple names: *E-temen-an-ki*, "the foundation stone of heaven and earth," the zikkurat of Marduk in Babylon; *E-zida*, "the true, or fixed, house," in honor of Nabu in Borsippa; *E-dur-gina*, "the house of the established seat,"[6] to Bel-sarbi in Baz; *E-anna*, "the heavenly house," the temple

[1] ERMAN, *Life in Ancient Egypt*, chap. xii, London, 1894.

[2] STADE, *Geschichte des Volkes Israels*, I: 311 ff., Berlin, 1889.

[3] WINCKLER, *Geschichte Israels*, II: 259.

[4] *E-kua*, "the dwelling house," a papakhu, dedicated to Marduk in E-sagila, Babylon. JASTROW, *Rel. of Bab. and Ass.*, p. 638.

[5] E-gal-makh, "the great palace," an old temple in Ur. JASTROW, *ibid.*, p. 638.

[6] This expression may perhaps refer to some emblem of the god, like the Hebrew ark, "the mercy seat."

of Ishtar at Erech; *E-dim-anna*, "the house of heavenly construction," to Sin at Borsippa; *E-an-dadia*, "the house reaching to heaven," at Agade; *E-dur-an-ki*, "the link of heaven and earth," at Larsa; and *E-gubba-an-ki*, "the point of heaven and earth," in Diblat.[1]

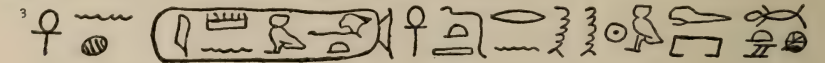
The simplest name for temple in Egyptian is , *ḥt ntr*, "the house of god." The word , *ḥt*, means a large house, a castle, hence the king's palace. Thus the sacred building is to the god what the palace is to the king, a glorious dwelling place. There is also another word for house, , *pr*, which is always used for the god.[2] The meaning of *pr* included all the estate dedicated to a god, even the herds which were to be sacrificed, while *ḥt* referred only to the building.

It is possible to trace clearly the development of the temple names in Egypt. First we find simple, short names, as *Opet* for Amon's temple in Thebes, and *Esher*, the temple of Mut. In the Middle Empire there was a decided change. A taste for long, high-sounding names was cultivated. In the name was included, not only the place in which the temple was erected, but also the name of the king who built it or contributed largely to its glory. Thus the name of the famous temple in the Fayum capital was "that Amen-em-het may live forever in the house of Sobk in Shedt."[3] In the New Empire the temple names retained the chief characteristics of those of the Middle Empire, but they were even more elaborate. Temples erected by the same king were distinguished from each other by some modifying phrase, as "the temple of Ramses ḥeq On in the house of Rê'" in Heliopolis, and "the temple of Ramses ḥeq On in the house of Rê', built for millions of years," in Tell-el-Yehudîeh.

The most common Hebrew name for temple is הֵיכָל, from the Assyrian *ekallu*, "palace, temple," a loan-word from the Akkadian *Egal*, "a great house." It may be related to the Hebrew root יכל = וכל = כול "to measure, hold, contain," hence a large, commodious building, a royal palace.[4] The secondary meaning is temple, the palace of God.[5]

[1] JASTROW, *Rel. of Bab. and Ass.*, pp. 638 f. See also the list of Babylonian and Assyrian temples by PINCHES in *Proc. of the Soc. of Bibl. Archæology*, Vol. XXII, Part IX.

[2] ERMAN, *Life in Ancient Egypt*, note on p. 284. is most frequently used as a determinative for temple. is also a common name for temple.

[3] 

L. D., II: 138*e*.

[4] Amos 8: 3; Isa. 13: 22; 39: 7; Psalms 45: 9; Dan. 1: 4; 1 Kings 21: 1.

[5] Isa. 4: 5. הֵיכַל יְהוָה occurs in 2 Kings 24: 13; 2 Chron. 3: 17. In a few places we find הֵיכַל קֹדֶשׁ, "sanctuary."

The tertiary meaning of הֵיכָל is the Holy Place of the temple.[1] The LXX renders הֵיכָל with *οἶκος* or *ναός*. The word for temple in the Apocrypha and the New Testament is *τό ἱερόν*. Just as in the Egyptian we found two words for "house" in the temple names, so also in the Hebrew there are two words, הֵיכָל, "the royal house," and בַּיִת, a more general word for a dwelling, including, like the Egyptian *pr*, the whole estate. בית יהוה and בית אלהים occur frequently. In rabbinical writings the following names are used:

בֵּית הַמִּקְדָּשׁ, "the house of the sanctuary," בֵּית הַבְּחִירָה, "the chosen house," and בֵּית הָעֹלָמִים, "the house of the ages." בַּיִת is usually joined to the name of the god in whose honor the temple had been built, as בֵּית עֲנָת and בֵּית שֶׁמֶשׁ.[2] The temples of Byblos and of Paphos are called *ἴερας*[3] in the pictures of these temples on ancient coins.

From this study of the temple names we may gather:

1. That in all Semitic countries the fundamental notion of the temple is that of a glorious dwelling place for the deity.

2. That in the Assyrio-Babylonian temple names "the mountain home" of the gods, while in the Egyptian the names of the builder and the place, are specially emphasized.

3. That the simplicity of the Hebrew "house of Yahveh" stands out in bold contrast to the more elaborate temple names of Israel's mighty neighbors.

[1] 1 Kings 6:5; 7:50. It is a singular fact that this word, when used in a limited sense, does not refer to the Holy of Holies, as one would naturally expect, for this was the very place where the deity was supposed to dwell.

[2] Josh. 19:38; 1 Sam. 6.

[3] PERROT AND CHIPIEZ, *Hist. of Art in Phoenicia and Cyprus*, Figs. 19 and 67, pp. I: 61, 129. From DONALDSON'S *Architectura Numistica*.

CHAPTER I.

CHARACTERISTIC FEATURES OF ORIENTAL TEMPLES.

1. ASSYRIO-BABYLONIAN TEMPLES.

One of the most interesting features of modern discoveries in Bible lands is the light they have shed on the architecture of these ancient peoples, who inhabited, not only Palestine, but the river valleys of the Euphrates and the Nile. First, then, we would study the plan of the Assyrio-Babylonian temples. The sources of information are twofold: References to the temples in Grecian literature, and the results of modern excavations. The latter may contain references by the Assyrians or Babylonians themselves in their inscriptions, as well as show the remains of ruins from which we may gather material for a safe reconstruction.

References to these temples by Greek writers are very scant. Herodotus claims to have seen the temple of Bel in Babylon, and gives us an interesting, though very indefinite, description of it. In the time of Diodorus this temple of Bel seems to have been destroyed, for he speaks of it as a building "which time had caused to fall."[1] In the same passage he further adds: "Writers are not in accord in what they say about this temple, so that it is impossible for us to make sure what its real dimensions were." Both Strabo[2] and Diodorus[3] claim that the building was destroyed by the Persians. There is scarcely a historical foundation for this claim, because the Persians may have plundered the city and perhaps even the temple, but they would hardly have taken the trouble of destroying the building. A knowledge of the building material is enough for a satisfactory explanation. Time and weather were the agents used in the demolishment of this ancient temple.

Thus we must depend almost exclusively on modern excavations for our information as to the Mesopotamian shrines.

The building material of the temples, both in Assyria and Babylonia, was clay. In Assyria, to be sure, there was access to stone, and it was, indeed, employed for altars and slabs for inscriptions, but not

[1] τοῦ κατασκευάσματος διὰ τοῦ χρόνου διαπεπτωκότος. II: 9: 4.

[2] Strabo, XXI: 5.

[3] Diodorus, II: 9: 19.

in the erection of the temple walls. Assyria adopted the Babylonian custom of using bricks. In Babylonia the scarcity of stone and an abundance of clay naturally suggested bricks as the proper building material.[1] The easy task of preparing the material resulted in an architecture which was characterized by hugeness rather than artistic taste. Thus the temple grew rapidly, one department after another being added to the original zikkurat.

The most prominent building within the sacred grounds was the zikkurat, or the high tower.[2] The story of the Tower of Babel[3] shows what a prominent part these "high places" must have occupied in Babylonia. It was the pride of the king who built it and the glory of his people. Thus the kings vied with each other in erecting as high a tower as possible.

The oldest now known zikkurat, found at Nippur by Peters and Haynes,[4] comes from the second dynasty of Ur — *i. e.*, about 2700 B. C. But this may not be the oldest type of the Babylonian temples, for it had three stages, while it is quite likely that the original type of the zikkurat had only one high plateau.[5]

Jensen[6] has shown that the purpose of the zikkurat was to imitate a mountain. The reason for this view is found not only in the very common name for temple "the mountain house," but also in the conception, prevalent among the ancients, that the gods had their home on some high mountain. Just as the mountain gradually rises from the plain and grows smaller in proportion as it reaches up toward heaven, so does the zikkurat, rising from a broad foundation, grow smaller with each succeeding terrace, until the top forms merely an insignificant square peak. The Babylonian kings took special pride in the height of the zikkurat, and boasted of the top "reaching heaven."[7]

As in the case of the pyramids of Egypt, the base of the zikkurat was square and had an approximate orientation according to the four

[1] JASTROW, *Religion of Babylonia and Assyria*, pp. 612 ff. The durability of the mud bricks at first used was not very great, hence the temples had frequently to be repaired, if not rebuilt, but later on the glazed bricks were used. When the art of using cement as early as Gudea's days had been discovered, the temples would last longer. Wood was also used, but only for the roof. Precious cedars were secured from the Lebanons.

[2] The word means simply "a high edifice." The Hebrews and their neighbors did also designate their temples as "high places."

[3] Gen. 11: 4.

[4] PETERS, *Nippur*, II: 124.

[5] See further the discussion in chap. v.

[6] JENSEN, *Kosmologie*, pp. 185–95.

[7] Tiglath Pileser I., Col. VII, ll. 102, 103. HILPRECHT, *Old Bab. Inscriptions*, I: 1, pls. 32, 33. Nabopalasser Cylinder, Col. I., l. 38, according to JASTROW, *Rel. of Bab. and Ass.*, p. 613.

cardinal points.[1] It has been suggested that the cause for choosing the square base, and for this attempt at a correct orientation, is found in some symbol, as the one in the title "king of the four regions."[2]

From the square base the masonry rose perpendicularly to a certain height. From the center of this plateau rose a second stage of the square masonry, and so on until several stories had been built. Along the edge of each terrace there was a parapet of a peculiar shape. It looked like a row of cross-sections of miniature terrace towers.[3] The height of the zikkurat varied according to the number of stories. Those at Nippur and Ur were about 90 feet, and that at Borsippa 183 feet. The latter had a base of 272 feet square. The terrace was at each stage twenty feet broad, *i. e.*, from the edge of one story to the wall of the next. The following dimensions may give us an idea of the proportions of these structures :

Terraces.	Base.	Height.
First-story	272 feet square	26 feet
Second-story . . .	230	26
Third-story	188	26
Fourth-story	146	15
Fifth-story	104	15
Sixth-story	62	15
Seventh-story . . .	20	15

Sargon's zikkurat at Khorsabad was of about the same height.[4]

The number of stages in the zikkurat was different in different temples, but the most common numbers were three, four, and seven. There were three at Nippur and Ur, four at Larsa, and seven at Babylon and Borsippa.[5] These numbers are also found in ancient pictures of the zikkurat.[6]

The ambition of the royal builder urged him to erect as high a monument as possible, and thus the aim was to make seven stories, seven being the number of perfection. It is a singular fact that when a smaller number was used it was either three or four. These numbers, as well as seven, have been considered sacred in all nations of antiquity. Seven, according to the Babylonians, stood for the heavenly

[1] PETERS, *Nippur*, I: 246; II: 120.

[2] WINCKLER, *Altorientalische Forschungen*, III: 208–22.

[3] This ornament resembles somewhat a double staircase. . The same kind of ornamentation occurs throughout all Assyrio-Babylonian art. The tops of altars were often adorned in this way.

[4] JASTROW, *Rel. of Bab. and Ass.*, p. 616.

[5] Sargon's zikkurat at Khorsabad had probably seven stages, though only four have been found. PERROT AND CHIPIEZ, *Hist. of Art in Chaldea and Assyria*, I: 388.

[6] HOMMEL, *Geschichte Babyloniens und Assyriens*, p. 19.

bodies, the sun and the moon and the five planets, Ishtar, Marduk, Ninib, Nergal, and Nabu, hence there was a story for each one of these. The name of the zikkurat at Uruk, "the house of the seven zones," may indicate, as Jensen[1] suggests, the seven zones into which the earth was divided by ancient geographers. Jastrow[2] thinks that in the name "the seven directions of heaven and earth" we may discover a similar division of the whole universe into seven zones. If so, the zikkurat would become the symbol of the universe. But whatever may have been the origin of the usage of these numbers, it is certainly clear that the intention was to produce something enormous, and seven stood for hugeness, which from an Assyrian point of view meant perfection.

There was at first a narrow staircase leading from one story to another inside the masonry, but later on there was built a winding balustrade around the tower.

In the highest story there was a small chamber, according to Herodotus, in which the god was supposed to dwell. Traces of such a room were also found at Nippur.[3] That room may therefore be regarded as the most sacred spot within the temple area. At Nippur it was called the "house of the oracle." The name itself indicates the character of the monument.

The sacred area contained, besides the oracle, places of worship for the masses. In front of the zikkurat there was a large court, where occasionally jars have been found which may have been used in the religious ceremonies, and it is quite natural to suppose that there had stood in the court a larger altar, like that of the Jerusalem temple.

There were at Nippur numerous other buildings, but one in particular attracts the attention. In front of it was a large court surrounded by columns of brick. On each side of the entrance stood a brick column. Peters thinks that in front of the gateway which led to the sacred ground there stood likewise two columns, just as there were two obelisks at the propylons of the Egyptian temples. De Sarzec[4] also found two large, round columns at the temple of Lagash. Beyond the gateway there were two halls adjoining each other, the second being the smaller. Thus we find the same threefold division of this temple as in the Jerusalem temple.

Assyrio-Babylonian Temple.	Solomon's Temple.
1. The Vestibule	The Porch.
2. The Naos	The Holy Place.
3. The Papakhu	The Holy of Holies.

[1] JENSEN, *Kosmologie*, p. 171–74.
[2] JASTROW, *Rel. of Bab. and Ass.*, p. 620.
[3] PETERS, *Nippur*, II: 122.
[4] DE SARZEC, *Découvertes en Chaldée*, pp. 62–4.

Layard points out a similar division in Nineveh.[1] In the papakhu he found a statue of the god to whom the temple was dedicated. At Nippur certain writings were found in the papakhu, which would indicate that the archives of the temples were kept in that most sacred place. Gudea describes the papakhu as a "dark" chamber.[2] Herodotus[3] speaks of a statue of Marduk and a golden altar in front of it in the temple of this god at Babylon.

On the sides of the court were numerous chambers which were used for storing the sacrificial utensils. Some of them may, perhaps, have been dwellings for the priests and stalls for the merchants who sold the necessary votive gifts, etc. It is quite possible that various school buildings and halls of justice were located within the temple area.[4]

Besides the statue of the god in the papakhu there was a large number of other pieces of sculpture in the temple. At the entrance there stood two enormous lions, cut either in limestone or alabaster. There were also huge bulls, which may have, in Assyria and Babylonia as in Egypt, a religious significance, especially in connection with the temple architecture.[5] The eagle, which seems to be the symbol of Asshur, occurs frequently in the decorations of the temples.

The chief means of decoration of the Assyrio-Babylonian temples was enameled bricks of various colors, mostly blue and yellow. On the walls of the zikkurats the colors varied with each story. At Borsippa Peters found bricks "twisted, curdled, and broken by heat. A few of them of a dark red color, but most of them yellow, and some of them almost black."[6] In the interior of the large halls these glazed bricks were arranged in accordance with certain textile patterns. But the greatest skill and labor were bestowed upon the gateway entrance and the doors. The latter were generally covered with bronze, skilfully wrought. The best example is found in the British Museum, the bronze gates of Balawat.[7] Precious stones of various kinds and expensive, imported wood occupied a prominent place in the adorning of the ancient Assyrian and Babylonian temples.

1 LAYARD, *Discoveries among the Ruins of Nineveh and Babylon*, pp. 642–8.

2 Inscription D, Col. II, l. 9. 3 HERODOTUS, I:83.

4 Gudea mentions a hall of judgment in the temple of Ningirsu at Lagash.

5 "Nebuchadnezzar speaks of retaining the 'bull' statue of the old temple to Nanâ at Erech." JASTROW, *Rel. of Bab. and Ass.*, p. 632.

6 PETERS, *Nippur*, I:214.

7 BIRCH AND PINCHES, *The Bronze Ornaments of the Palace Gates of Balawat*, London, 1881. According to JASTROW, *Rel. of Bab. and Ass.*, p. 626.

2. THE EGYPTIAN TEMPLES.

The pyramids are the most striking features of the Nile valley. As these structures are generally regarded as merely royal tombs, it is not the right place to deal with them here,[1] but we pass over to the rectangular temple.

The Temple of the Sphinx is the best example of the Old Empire temples. The material is roseate granite. The building material of all Egyptian temples is stone, granite, sandstone, and limestone. Diorite and alabaster are used for decorations. The Temple of the Sphinx consists of three halls, and three or four small chambers. First there is a long hall, extending east and west, 57 feet long and 30 feet wide. Ten square pillars supported the roof in this hall. At right angles with it we find a narrow hall, 33 feet long and 23 feet wide, containing six square columns. Parallel to this, but separated from it by a narrow passage, is a third hall, where there are no columns. But in this hall there is a small well, and this we may find to be of great significance. At either end of this hall were small chambers, as is also the case on the sides of the first hall mentioned. A long entrance passage leads from the outside to the second hall.

In the Old Empire, small temples stood at the foot of the pyramids. They had the same rectangular shape as the Temple of the Sphinx. The one near the third pyramid was examined by Jomard.[2] First he found a large court, then a vestibule, 103 feet long and 46 feet wide, then the main hall, 177 by 186 feet, and finally several adjoining chambers like those of the Temple of the Sphinx. Like it these temples had no ornamentations, and Jomard saw no signs of columns, but Belzoni observed some traces of them in the vestibule. Thus we may conclude that the plan of the Old Empire temple shows four distinct features, which we shall find further developed in the New Empire temple. See the newly discovered temple (fifth dynasty) at Abusir.[3]

The chief contribution of the Middle Empire seems to be the erection of obelisks and pylons.[4] We know that Usertesen I. erected an obelisk, 66 feet high, of red granite from Assuân in Heliopolis,[5] and

1 In the last chapter we shall endeavor to show that the pyramids were not only royal tombs, but also the oldest type of the Egyptian temples.

2 JOMARD, *Description de l'Égypte*, V: 654.

3 SCHÄFER, *Zeitschrift für Aegyptische Sprache und Altertumskunde*, Band XXXVII, 1899, pp. 1 f., and Band XXXVIII, 1900, pp. 94 f. In this connection Petrie's work in his thorough investigation in 1881–82 is of great value. PETRIE, *Pyramids and Temples of Gizeh*.

4 An obelisk, however, was found at Abusir. See Schäfer's article, mentioned above.

5 STEINDORFF, in Baedeker's *Egypt*, p. 101.

knowing, too, the close connection between the obelisk and the pylon, it is inferred that the latter also was built at that time as a distinct feature of the temple.

It is, however, the New Empire which produced the great temples of Egypt; those of Luxor and Karnak having world-wide fame. It is true that the places on which they were built were ancient sacred localities, but there is nothing left of the older temples, and thus we may regard these later temples as the most typical as well as elaborate of the New Empire temples. They are often the results of the work of many dynasties. They have thus undergone so many changes from the original plan, and have consequently so many halls and chambers and pylons, that it would not be practical to chose them for a study of the chief characteristics of the Egyptian temples. We must therefore study first some less elaborate sanctuary.

One of the simplest temples is that of Rameses III., at Karnak. It is often referred to as the typical Egyptian temple.[1] This temple is placed at right angles with the Karnak temple, and even enters upon the area of the great Ptolemaic court. Approaching it from this court we first come to a double pylon, or a huge gateway. There were two kinds of pylons, single and double. A single pylon was a large tower of masonry in the shape of a truncated pyramid, *i. e.*, the sides were slightly inclined. The upper edge was usually crowned with a round moulding. In the double pylon there were two such towers with the doorway between them. In these pylons there were often small rooms, or in some a staircase leading to the roof. They may have been used as a temple fortification. In front of the pylons there stood usually a pair of obelisks, and often two or four colossal statues of the builder. There were also four flagstaffs of cedars from the Lebanons, which were richly adorned with electrum,[2] resting on the ground and held in place higher up by large clamps in the façade of the pylon.[3] Beyond the pylon we find a large court, or rather a roofless hall. Along the sides of this hall were rows of columns which were connected with the walls by a roof, thus forming on three sides a covered passage. This room is usually called the peristyle hall. In the inscriptions it bears the names "the large hall," "the hall of assembly," and "the hall of appearance." A narrow door leads into the next room, whose roof is supported by eight columns. This hall is called the hypostyle hall.

[1] In the description of this temple the cut of the Karnak temple in Baedeker's *Egypt* has been consulted.

[2] *L. D.*, III: 71*a*, ll. 22, 23.

[3] STEINDORFF, in Baedeker's *Egypt*, pp. clv, ff.

Then we come to the most sacred spot in the temple, the adytum or sanctuary. In this particular temple we find three small chambers, because the temple was dedicated to the three gods Mut, Amon, and Khonsu, each of whom had a shrine. In those temples which were dedicated to a single god, as the Temple of Khonsu at Karnak, we find a single chamber, surrounded by a narrow passage on all sides. That chamber has usually two doors, one at each gable, but often only one. Beyond and around the adytum were smaller chambers, whose purpose is not evident; but it is supposed that they were used for the storage of temple paraphernalia. In the adytum were often found a statue of the god, and always the sacred boat[1] and other sacred emblems. The adytum was usually dark. It is probably the nucleus around which the temple grew. First were added some chambers on the sides and the hypostyle hall in front, then the peristyle hall and the pylons. In the case of the larger temples there were further developments, always keeping the rectangular shape. Thus we find at Karnak six pylons in succession, besides the many that lead up from other temples in its immediate vicinity.

Perhaps the most symmetrical of the Egyptian temples is that of Horus, at Edfu. The adytum has only one opening, thus making it perfectly dark. In it was found a beautifully wrought granite shrine. On three sides of it ran a narrow corridor, but in front were two vestibules. Around these corridors and vestibules were numerous smaller chambers.[2] Behind these chambers, on one side of the temple, a narrow staircase led up to the roof. In front of the vestibules was a small hypostyle hall, containing twelve round columns. Then came the great hypostyle hall with twelve large and six small pillars. Next are found the peristyle hall, forming a large open court in the center, and finally, in front of all, the enormous pylons. Around the whole ran a large wall, making a narrow passage with the temple proper, and forming with the pylons the boundaries of the peristyle hall. Thus we find that, whether simple or complex, the temple plan consisted of five chief parts: (1) the adytum; (2) the surrounding chambers; (3) the hypostyle hall; (4) the peristyle hall; (5) the pylons.

The Egyptians were particular in not leaving any space on their temple walls, or even on the columns, free from inscriptions. Most of the figures are simply ceremonial pictures used for decorations, but some of them are setting forth the history and adventures and achievements of the various kings who may have built or added some

[1] See further chap. iv.

[2] Arranged like the chambers in Solomon's Temple.

ORDER OF THE DIFFERENT PARTS IN THE EGYPTIAN TEMPLE PLAN.

Temple of the Sphinx.	Pyramid Temples.	Temple of Rameses III.	Temple of Khonsu.	Temple of Edfu.	Temple of Karnak.
					I. Pylon (Ptolemaic).
					Peristyle hall.
					II. Pylon (Rameses I.).
					Great hypostyle hall.
					III. Pylon (Amenhotep III.).
					Central court.
		Pylon.	Pylon.	Pylon.	IV. Pylon (Thutmosis I.).
First hall.	Pillared court.	Peristyle hall.	Peristyle hall.	Peristyle hall.	I. Colonnade.
				Great hypostyle hall.	V. Pylon (Thutmosis I.).
Second hall.	Vestibule.	Hypostyle hall.	Hypostyle hall.	Small hypostyle hall.	II. Colonnade.
				I. Vestibule.	VI. Pylon.
				II. Vestibule.	Vestibule.
Third hall.	Hall.	Adytum, Mut, Amon, Khonsu.	Adytum.	Adytum.	Adytum.
Chambers.	Chambers.	Surrounding chambers.	Surrounding chambers.	Surrounding chambers.	Surrounding chambers.
					Court and colonnades.
				Surrounding walls.	Surrounding walls.

part to the building. Coverings of silver and gold and ornaments of precious stones were frequently used in beautifying the temples.

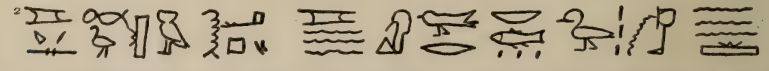
The surrounding grounds were beautified by parks and flowers,[1] and each temple seems to have had its lake. These artificial lakes were evidently supplied with water from the Nile.[2] The lake at the temple of Mut at Karnak surrounded that sanctuary in the shape of a U. In the immediate neighborhood of the temple were granaries[3] and storehouses, where foreign prisoners "both male and female" were kept.

3. THE PHŒNICIAN TEMPLE.

In Phœnicia we do not find such an abundance of material as in Assyria and Egypt for a reconstruction of a typical temple. The Phœnicians were experienced tradesmen and were good distributors of the Assyrian and Egyptian manufactures. They were even great manufacturers themselves, but in architectural lines they seem to have been behind these nations, for they did not erect their most famous temples before the Græco-Roman period. Hence they cannot shed any light directly on the plan of Solomon's Temple. But as it is most likely that earlier sanctuaries, though insignificant as compared with those of Egypt and Assyria, may have preceded these later shrines, and as we know how slowly the Semitic peoples adopted something fundamentally new in their religious customs and architecture, we may safely conclude that the chief elements of the older temples may be discovered in such sacred places as Byblos and Paphos.

But first let us cast a glance at the El Maabed, at Amrit. This is one of the oldest remains of the Semitic race in Phœnicia, and shows a decided Egyptian influence. The main part of this small sanctuary is the rectangular cella. It is a stone chapel, in which an image or symbol of the god was kept, corresponding to the Egyptian adytum. This hall was closed on three sides by huge monolithic slabs; the fourth side was open. The roof consisted of one large stone, which pro-

[1] "He caused beautiful flowers to grow around it" (*i. e.*, the temple of Luxor). The Building Inscription of Amenhotep III. *L.D.*, III: 71*a*, l. 13. In the same writing we find a reference to a temple lake at Luxor: "Nw is in his lake in every season."

[2] 

"Its lake is filled with all (lit. every) the great Nile. Fishes and birds wash (therein ?)." This is a reference to the lake of the Mortuary Temple of Amenhotep III., *L. D.*, III: 71*a*, l. 6.

[3] *L. D.*, III: 71*a*, l. 6.

truded beyond the sides. Renan,[1] who discovered it, found some evidences of this projecting part having been supported by two pillars, presumably of metal. The whole chapel rests on the rock, which thus forms the floor. Here also we find traces of a temple lake. Renan remarks:

> The four walls of the rock which serves as a base to the edifice are smooth for the upper two-thirds of their height, the lower third, on the other hand, presents the appearance of rock which has long been lapped by water. This circumstance, added to the actual existence of a spring, whose waters now escape through the boundary wall, leads us to suppose that when the the north face was shut in with a wall the inclosure formed a vast basin, in which the tabernacle rose like a "holy of holies."[2]

The only ornamentation now existing is an Egyptian cornice at the ceiling, but it is supposed to have been profusely adorned with metal coverings which have now disappeared.

Byblos was a holy city rather than a commercial center, "the Jerusalem of the Lebanons."[3] The only knowledge we have of the plan of its temple is derived from ancient coins on which the sacred building was pictured.[4] To the left we notice a pavilion of lattice work on the sides and the ridged roof. In front we find the usual triangular Grecian gable, supported by two round columns. To the right we see an open court formed by a covered colonnade. In the center of this court stands an altar, ornamented on the sides after a lattice pattern. The horns of the altar are particularly noticed. Behind this altar, or possibly on the top of it, rose a high, conic pillar, indicating the phallic worship at this temple.[5] In the left cella stands a similar cone on a triangular altar.[6] Flights of steps led to both parts, indicating that the temple was situated on an elevation, or that there was a court below.

The only ancient inscription which deals with the temple of Byblos is the stela of Jehawmelek (about 500 B. C.[7]), in which we find an address of the king to the "Mistress of Gebal," telling how he desired to gain certain favors because of the improvements and repairs he had made in the temple. Unfortunately, the inscription is

1 RENAN, *Mission en Phénécie*, pp. 63–8, and plate X.

2 *Ibid.*, pp. 64, 65. 3 *Ibid.*, p. 21.

4 See DONALDSON'S *Architectura Numistica*. A reproduction is found in PERROT AND CHIPIEZ, *Hist. of Art in Phœnicia and Cyprus*, I: 61.

5 Perrot and Chipiez have interpreted what we have designated as an altar simply as a balustrade protecting the cone. *Hist. of Art in Phœnicia and Cyprus*, I: 258.

6 Or it may possibly be a stand supporting a bowl in which to burn incense.

7 *Corpus Inscriptionum Semiticarum*, Vol. I, Part I, No. 1, Plate I, pp. 3, 4.

not clear throughout, yet three things are evident from the text: (1) there was either in the temple or in the precinct a bronze altar;[1] (2) gold was largely employed in the decoration of the building;[2] (3) the temple had a portico and columns.[3]

The bronze altar and the gold decorations point to the same class of artistic work which we find in the Solomonic temple. Herodotus[4] also speaks with admiration of "the great stela of pure gold on the threshold of the temple of Melkart in Tyre." It is not certain whether the columns were of brass or some other metal. The portico may have been the same as the one represented on the coin of Byblos.

It was particularly at Byblos that the Aštarte cult, with its licentious rites, flourished, which later on was continued in the Aphrodite cult of the Greek and Roman period. Renan found at Byblos grottoes constructed for the purpose of prostitution.[5] In these grottoes there were occasionally a statue of Aštarte.[6] Similar grottoes were found in Sayyidet-el-Mentara, in the village of Magdouschè, in Adloun and Vastha.[7]

4. TEMPLE IN CYPRUS.

The ancient civilization of Cyprus was almost identical with that of Phœnicia. It is therefore natural to suppose that its religious architecture would have the same characteristic features as the Phœnician. Such a supposition becomes a certainty when we observe the pictures of the most famous temple on the island, that of Paphos, as represented on relics found in that place. Perrot and Chipiez[8] have given us a most interesting and vivid picture of the same, based on the work of Engel.[9] Tacitus[10] mentions a visit to this temple by Titus at the time of the Jewish war, and adds that "the emperor took pleasure in contemplating the wealth of the temple, as well as many antique objects, to which the vanity of the Greeks gave an exaggerated age." He also speaks of the altar, on which sacrifices were offered under the open sky, and yet no rain fell on them. The latter remark is explained by the dry atmosphere in this region, but it also confirms the idea gained

1 *Ibid.*, l. 4. 2 *Ibid.*, ll. 4, 5. 3 *Ibid.*, l. 6.

4 HERODOTUS, II: 44. 5 RENAN, *Mission en Phénècie*, p. 204.

6 "Dans la caverne de Gébeil et dans celle dont nous parlons en ce moment (Vastha) il y a une niche pour la statue de la déesse." RENAN, *Mission en Phénècie*, p. 653.

7 RENAN, *Mission en Phénècie*, pp. 518, 647, 653, 662. The last one may possibly have been constructed by Hiram of Tyre, though the evidences are not fully satisfactory. A grotto of Mount Eryx, in Sicily, may have had the same origin.

8 PERROT AND CHIPIEZ, *History of Art in Phœnicia and Cyprus*, I: 330 ff.

9 ENGEL, *Kypros*, 2 vols. 8vo, Berlin, 1841. 10 TACITUS, *History*, II: 3.

from the pictures on the coins that the altar was situated in an open pavilion or peristyle hall.[1] We have at present three distinct pictures of this temple, on a ring, on a mirror, and on a coin, which in the main give the same views of the temple, though one may be more elaborate than the other. All three of these show the façade of the temple, the lower open court, the upper peristyle court, and in the coin the front wall of the cella. The ring belongs to the famous Cesnola collection. It was found by General Cesnola at Curium on Cyprus, and the picture of the Paphian sanctuary is engraved in a carnelion stone, which is still in place.[2]

The picture shows the forecourt in the shape of a semicircle, two tiny lines indicating the balustrade around it. In the upper court we notice first the two lofty pillars, on each side of which we find a part of the colonnade. In the center was the cone-like pillar, or altar perhaps, and between the lofty pillars and the side columns were the usual candelabra. The picture is so small that only the bare contours may be seen, and it would be difficult to interpret it were it not for the more distinct pictures on the mirror and the coin.

The mirror found by Cesnola at Paphos[3] shows a part of the forecourt, the two pillars with lotus-shaped capitals, a square altar with two asherahs, one on each side. That which seems to be a crossbar, uniting the pillars, may in reality have been intended to represent the roof of the colonnade. The size of the altar indicates that it was a most prominent feature of the picture, standing probably in the center of the court.

The best picture is that on the coin.[4] The semicircular court is inclosed by a balustrade. Two gates stand ajar, showing the pavement of the court. In the other pictures this may have been taken for lattice-work on the wall below the upper court, but here we find clearly it is meant to represent the pavement. A dove is feeding in the courtyard. Perrot and Chipiez regard the two lofty structures in front, together with the wall showing the windows, as a narrow pylon with two small, slender towers.[5] If that is true, they represent a shape of pylons whose analogy we find nowhere else in the Semitic world. It

[1] This may also confirm our conjecture in regard to the altar on the coin of Byblos, which Perrot and Chipiez call a balustrade around the cone.

[2] See the cuts of the ring in PERROT AND CHIPIEZ, *History of Art in Phœnicia and Cyprus*, II: 242.

[3] CESNOLA, *Salaminia*, p. 63.

[4] See DONALDSON'S *Architectura Numistica*. Also PERROT AND CHIPIEZ, *History of Art in Phœnicia and Cyprus*, I: 273.

[5] If so, why not regard them as some kind of flagstaffs? The Egyptian pylon was adorned with such.

is more probable that they are two round columns like Jachin and Boaz in Jerusalem.[1] Behind and on the sides of the pillars is stretched the roof which covered the colonnade. On this roof are two pigeons, the symbols of Aštarte. Two of the columns appear on the coin. They are evidently Corinthian. Between the two larger columns we notice the altar and its cone. Within the pavilion we also find two candelabra for evening illuminations, or perhaps two stands, supporting bowls in which incense may have been burnt. Now as to the three openings between the large pillars, there have been several conjectures. We have already mentioned the view of Perrot and Chipiez. Others have regarded them as part of a balustrade connecting the two pillars. On Cesnola's ring and mirror there seems to be a bar connecting them. The only difference is that on the mirror this bar is too low to correspond to that part of the picture on the coin, but just in the right place to represent the roof of the colonnade. From this we may conclude that the pillars stood isolated in the front of the peristyle court, while the so-called "windows" were entirely left out. What seems to be a bar on the ring corresponds in place to the "windows" on the coin. If these "windows" are not connected with the pillars and are above the roof of the colonnade, they must evidently belong to some wall beyond the peristyle court. If so, the star and the cresent moon, the emblem of the goddess, would be regarded as some ornament on the same wall, while on the supposition of Perrot and Chipiez they would have no organic part in the temple plan, being above the line which they regard as the top of the pylon. The natural inference would then be that these figures are signs indicating a house beyond. Whether that be a hypostyle hall or an adytum, it is impossible to tell. If it is a hypostyle hall these openings may be of the same nature as the gratings of the hypostyle hall at Karnak. Similar niches are also found above the door in the royal tomb at Tamassos.[2]

From such scant sources of information it is almost impossible to make a complete reconstruction of the Phœnician temple. We may observe, however, the following features: (1) That in all the pictures we find a double court as in the Jerusalem temple; (2) that a cella is only inferred from one of the pictures; (3) that they show double columns in front of the peristyle court; (4) that an altar, a cone-asherah, and two candelabra are found in the peristyle court.

[1] See further chap. iii.

[2] MAX OHNEFALSCH-RICHTER, *Kypros*, p. 347.

CHAPTER II.

PREPARATIONS FOR SOLOMON'S TEMPLE.

1. DAVID'S RELATION TO THE TEMPLE BUILDING.

DAVID'S purpose in bringing the ark of the covenant up to Jerusalem was undoubtedly to secure for it a permanent house. The circumstances in the kingdom, however, made it necessary, first of all, to fortify the capital and build a royal palace. This David accomplished, but he did not find time or opportunity to erect the temple.[1] In building his house David seems to have have had the aid of Phœnician workmen. Hiram of Tyre sent him not only cedars, but also carpenters and masons.[2] Whether this was in compliance with some contract between the two monarchs we do not know, though it may be quite possible. The Chronicler[3] regards David as the planner of the temple, handing down the plans to his son. It is a singular fact that the earlier record knows nothing of this. David may, however, have made some preparations for the temple, which may have given rise to the tradition recorded by the Chronicler, for in the correspondence between the kings of Tyre and Israel, Solomon speaks as if Hiram was familiar with David's plans.[4] In these words there may even have been an allusion to a contract between David and Hiram, which caused Hiram to be the first to send messengers.

2. SOLOMON'S CONTRACT WITH HIRAM OF TYRE.

Whatever the previous plans and preparations may have been, this we know, that a definite contract was made between Solomon and Hiram as to securing material and supplying a working force. According to this contract[5] it was Hiram's duty to secure cedars, fir trees, and stones from the Lebanons, haul them down to the coast, and make rafts on which to ship the material to whatsoever point Solomon desired,[6] whence Solomon's people would drag them to Jerusalem. In return for these services Solomon was to provide food for Hiram's household,

[1] The numerous wars, the organization of the military forces, and the constant conspiracies of his later years may have prevented him from undertaking so large a work.

[2] 2 Sam. 5:11; 1 Chron. 14:1. [3] 1 Chron. 28:11 ff.

[4] 1 Kings 5:3. "Thou knowest how that David, my father, could not build an house for the name of Yahweh, his God, for the wars which were about him on every side, until Yahweh put them under the soles of his feet."

[5] 1 King, 5: 1–11; 2 Chron. 2:1–18. [6] This harbor was Joppa, according to 2 Chron. 2: 16.

consisting of 20,000 measures of wheat and 20 measures of pure oil a year.[1] The correspondence which led to this contract is written throughout in the first person. Josephus[2] asserts that in his time these letters were to be found in the Tyrian libraries, though he does not give us the proofs for such an assertion. The letters as he gives them are simply reproductions of the Hebrew.

Were there two Hirams of Tyre? Is the friend of David the same as the king who contracted with Solomon? From the narratives in 2 Sam. 5:11, 2 Chron. 2:3, and Josephus, *Ant.*, VII, iii:2, it would seem as if the Hiram of David's time and the Hiram of Solomon's reign was the same person. "But if the mention of the eleventh year of the thirty-four years' reign of the Hiram, who for the most part lived in Solomon's era, is correct, the other Hiram must have been his grandfather. Hiram's father is named by Josephus from the oldest sources Abibal."[3]

3. THE MATERIAL USED.

From the contract, as well as from the subsequent narrative, we gather that Solomon secured from the Lebanons "great stones, costly stones, and hewn stones" for the walls of the house,[4] and timber of cedars, cypress, and sandal wood for the roof and the trimmings.[5]

The conquerors of western Asia have always utilized the treasures of the Lebanons. Thutmosis III. made his expeditions through Palestine and Phœnicia, and brought back large booty for his temples. Among these things were cedars and other kinds of precious wood. The cutting down of the trees is represented in Egyptian reliefs.[6] In the quarries of the Lebanons the stones were not only cut out of the rocks, but they seem also to have been trimmed there.

4. TRANSPORTATION OF THE MATERIAL.

The Egyptians, who had only to drag the timber to the coast, used, no doubt, the same method as they employed in transporting their large obelisks and other huge monoliths.[7] They were dragged by men or oxen on low sledges.

[1] 1 Kings 5:9–11. The Chronicler further adds 20,000 measures of barley, 20,000 baths of wine, and has 20,000 baths of oil. 2 Chron. 2:10.

[2] JOSEPHUS, *Ant.*, VIII: ii, 8. [3] EWALD, *Hist. of Israel*, III: 226, note.

[4] 1 Kings 5:17. "In 1 Kings 6:7 a tradition has been recorded that the material was so well prepared in the quarries and the forests of the Lebanons that it could be put together in Jerusalem without a "blow of hammer, or ax, or tool of iron."

[5] 1 Kings 5:10. [6] *L. D.*, III: 31*b*. The same process is shown on the bas-reliefs of Essarhaddon.

[7] Bas-relief at Deir-el-Bahri. The obelisks of Hatshepsowet already rest in the boat, in which they were to be transported down the Nile, but the fact that they lie on the sledges indicates what method of transportation was used before they were placed in the boat.

Place,[1] in his great work on Nineveh, gives us a picture of the hauling of a monolith on a cart. It is the picture of a bas-relief from the ruins at Khorsabad. The stone is placed on a cart with four wheels, and prevented from falling off by heavy beams of timber. In front are six large cables, by which the men, walking six abreast, are pulling it. There are just as many cables attached at the other end. A body of men behind hold the cart back in case of an incline. Plate 44 *bis* shows the use of the lever in transportation.

What way was the material transported? Did it come by land through Galilee and Samaria, or by sea *via* Tyre and Joppa and then hauled to Jerusalem? Winckler[2] urges most forcefully the view that the former route was used. Arguing from analogy he points out the Assyrian mode of transportation mentioned above. Solomon had in all probability a quarry in the southern Lebanons where an army of men labored together with Hiram's builders.[3] If so, the nearest way would be through Galilee and Samaria. But we do not know where the quarry was situated. It might just as well be near the Phœnician coast, and if so, the other route would be easier. Under all circumstances the road through Galilee would be very rough for transporting such heavy weights.

The mode of navigation suggested for the transportation of the timber and the stones may not be the best possible, but still there is nothing improbable in the story. Already in the days of Thutmosis III. that route had been traversed clear down to Egypt. In his *Annals* Thutmosis III. speaks of his campaign in Phœnicia and of the large tributes which the princes of the Lebanons paid him. Then he says: "Behold, (they)[4] took a ship laden with all these things, with slaves male and female, with copper, lead, and emery, and all good things, and His Majesty sailed southward to Egypt."[5] Navigation has always started by men following the coast in small, inferior vessels. This route may, therefore, have been the easiest way to transport the material. All depends, of course, upon where in the Lebanons the quarries were situated.

The metal work was executed in the lower Jordan valley in the clay ground between Succoth and Zarethan.[6]

[1] M. Place, *Ninive*h, Plate XLIV.

[2] Winckler, *Geschichte Israels*, II, pp. 260 f. [3] 1 Kings 5 : 14 f.

[4] There is a lacuna where the subject should be, but the context shows clearly that the king and his followers are referred to.

[5] *Annals of Thutmosis III.; L. D.*, III, 31*b*. [6] 1 Kings 7 : 46.

5. PREPARATION OF THE TEMPLE AREA.

In order to find out the place in Jerusalem where the temple was situated, it is first of all necessary to observe the topography of the city in general. Jerusalem was situated on a high hill. On two sides were deep valleys: on the eastern side the Valley of Kedron, later called the Valley of Jehoshafat; on the southern side the Valley of Hinnom. In the center of the hill is a depression running north and south, called the Tyropœon Valley, thus dividing the city into two parts. Coming up the eastern hill we approach first the place where the City of David was probably situated. Higher up we come to the palace of Solomon, and next to it, though a little higher, the Temple of Solomon. It was near the spot on which David erected an altar,[1] the old threshing floor of the Jebusite king Arauna, where he saw the angel of pestilence. At present the "Dome of the Rock" stands in this place.

It is not certainly known how much area was included in the haram. Ezekiel's ideal temple had an area of 500 square reeds, or 3,000 square cubits, but this could hardly have been based on the exact measurements of Solomon's Temple. Considering the temple proper as having an area of 80 by 40 cubits, the Upper Court 100 square cubits, and the Lower Court 200 by 100 cubits, we would have an area of 370 by 240 cubits.[2]

In order to procure a level surface for the building, it was necessary to cut off protruding points and fill in cavities. At the same time the foundation walls were laid. Josephus speaks of the huge and strong stones that were placed at the bottom of the foundation walls.[3] Excavations show that a trench was hewn out of the native rock, in which the lowest course of stone was laid.[4] It is quite natural to suppose that in this substructure chambers or grottoes were constructed, and perhaps cisterns of water were also kept there, supplying the necessary water for the Molten Sea. There may have been a spring below, which gave rise to Ezekiel's vision of a fountain in the temple sending forth an ever-increasing river.

6. THE WORKING FORCE.

Who was the architect of the temple? We do not know, yet it is possible that this work was intrusted to a man by name of Hiram Abu,

1 2 Sam. 24:28; 2 Chron. 3:1. The Chronicler calls the Jebusite king "Ornan."

2 Herod's Temple seems to have been 600 by 597 cubits, according to Josephus. As we know that Josephus used the Greek cubit, and as his dimensions agree with the Bible statements, we infer that they must have used a cubit of equal length to the Greek, or about 18 inches.

3 JOSEPHUS, *Ant.*, VIII: iii: 1, 2. 4 HURLBUT, *Old and New Test. Student*, VII, p. 125.

sent to Jerusalem by Hiram of Tyre to supervise the decorative work. This man's father was a Tyrian and his mother a daughter of Naphtali.[1] The Chronicler represents him as having been a man of well-nigh universal knowledge, "skilled to work in gold, silver, brass, iron, stone, timber, purple, blue, fine linen, crimson, and to engrave any kind of work." The author of the narrative in the Books of Kings only claims for him skill as a brassworker. He was, no doubt, a good artisan, and the title Abu might indicate that he was the general overseer of the whole work. His masterpieces are enumerated in detail in both Kings and Chronicles.[2]

It is not stated how many thousand men Hiram engaged in the work, but they must have been fully as numerous as the Israelites. Among them were famous carvers of Zidon[3] and stonecutters of Byblos.[4]

Solomon's working force, which, under the leadership of Adoniram, the son of Abda,[5] was sent to the Lebanons, numbered, according to the Hebrew narrative, 30,000 men. Altogether there were 70,000 who carried burdens, 80,000 stone-hewers, and 3,300 overseers of the work.[6]

Thus the preparations were made, the edifice erected, and in the next chapter we shall study the plan according to which it was built.

[1] 1 Kings 7: 13, 14; 2 Chron. 2: 13 states that his mother was of the tribe of Dan.

[2] 1 Kings 7: 13 ff.; 2 Chron. 2: 13 ff.

[3] 1 Kings 5: 6.

[4] 1 Kings 5: 18.

[5] 1 Kings 4: 6.

[6] 1 Kings 5: 13–18. According to 2 Chron. 2: 2, 18 there were 3,600 overseers. These numbers are, no doubt, greatly exaggerated.

CHAPTER III.

THE PLAN OF THE BUILDING.

1. THE SURROUNDING WALLS.

THE narrative of the building plan in the First Book of Kings does not say anything about the outer walls. But that they existed may be inferred from the tradition to which Josephus alludes, when in a description of Herod's Temple he inserts the following parenthesis: "This hill (*i. e.*, the temple hill) it was which Solomon, who was the first of our kings, surrounded, by divine revelation, with a wall of excellent workmanship above and around the top of it."[1] We know that both in Assyria and Babylonia and in Egypt the sacred grounds were surrounded by high walls, and that at the entrances there were large pro-pylons, in front of which in Egypt there were two obelisks, and in Assyria, it is supposed, there stood two square pillars. If Solomon was entirely dependent on the Phœnician architect in all details, it may not be so certain that there were such walls, for as yet we have no evidence of their existence in the Phœnician temple plan.[2] But if he desired to make his temple as glorious as those of his Egyptian neighbors, it would seem most natural that such walls surrounded the temple.

2. THE PEOPLE'S COURT.

The whole temple was laid out with axis in the direction of east and west, the building itself also, like most Oriental temples, facing the rising sun. Entering through the eastern pro-pylon, and approaching the sanctuary, we come first to the Lower Court. This was the people's court, where they might gather and observe the ceremonies. It was accessible through many gateways,[3] whose doors were overlaid with brass. The court was a quadrangle, inclosed by colonnades on three sides. It is quite probable that Solomon built only the eastern side, which afterward was called Solomon's Portico in the second and third

[1] JOSEPHUS, *Ant.*, XV: xi. 3. The last expression refers, of course, to the cornice. There are differences of opinion as to its appearance, some restorers making it like the Egyptian cornice, and others like the Assyrian crenellations. Which it was, is impossible to determine.

[2] And yet there may have been walls around the Phoenician temples also, though they are not represented in those pictures of the temples which have been found. Besides, it would be difficult for the artist to show on a small coin the entire plan of the temple.

[3] 2 Chron. 4: 9.

temples, and that later kings completed the colonnade all around. The size of this court is uncertain. Ferguson estimates it to 200 by 100 cubits.[1]

3. THE PRIESTS' COURT.

The western side of the great court was a solid stone wall. A flight of steps led to the Upper Court, which is sometimes called the "court of the priests."[2] In 1 Kings 6:36 we read: "And he built the inner court with three rows of hewn stones and a row of cedar beams."[3] The word טוּר, which is translated "row," may mean a wall, a fence, an inclosure, as in Ezek. 46:23. If we accept this interpretation of the word, we must suppose that the walls surrounding this court on three sides were made up of three layers of stone and a cornice of cedar beams. In Exod. 28:17 the word means clearly a "row," referring to the four rows of precious stones on the breastplate. It seems possible that both these conceptions may have been included in the word טוּר as used here: a threefold inclosure, formed by rows of cut stones; hence a double colonnade. Were these columns isolated? No, "an inclosure of cedar beams, placed in succession," might be a large lattice work of beams, connecting all the columns, which, to an observer at a little distance, may look like one row of beams. It is a bungly circumlocution for a covered colonnade, but may have been the only way to express it. Such lattice-work is clearly indicated on the coins of Byblos and Paphos.[4]

In the Priests' Court was the rock which David had bought from the Jebusite king. On the top was a large, brazen altar, visible to the multitude in the Lower Court. It was a square chest of wood, overlaid with brass and filled with stones and earth. According to the Chronicler[5] there was also a scaffold of brass, or a kind of platform five cubits long, five cubits broad, and three cubits high, in this court. This platform may have been used by public speakers in addressing the masses, or in praying. The Molten Sea[6] was placed in the southeastern corner of the court, and the ten lavers, five on the north and five on the south side. We find, therefore, a close resemblance

[1] FERGUSON, *The Temples of Jerusalem*, p. 79. [2] 2 Chron., 4:9; Jer. 26:10.

[3] The same expression is used in 1 Kings 7:12 in regard to the great court around the palace of Solomon. See also Esdras 6:25 in regard to the same words used in connection with the second temple.

[4] On the Labican way near Rome a piece of a glass bowl was found in 1882, on the bottom of which there is a picture, which is supposed to represent the Solomonic Temple, and in this picture the house is surrounded by a row of pillars with a cornice of wooden beams. *Archives de l'Orient*, II: 439. According to PERROT AND CHIPIEZ, *Hist. of Art in Sardinia and Judea*, I: 235.

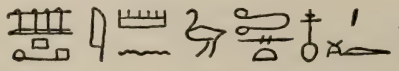
[5] 2 Chron. 6:13. [6] 1 Kings 7:39.

between the courts of Solomon's Temple and the two courts in the Phœnician temples, and also the terrace courts of Deir-el-Bahri. The double courts in Jerusalem correspond to the double peristyle hall in the Egyptian temples.

4. JACHIN AND BOAZ.

Crossing the court we reach a flight of steps which lead to the entrance of the temple proper, on each side of which stands a round pillar. Just as the pylons in Egypt had special names,[1] these pillars had also names. The one on the right side was called Jachin, and the one on the left Boaz.[2] Jachin means probably "he shall establish," and Boaz "in him is strength." Renan regards the two names as forming a sentence or a formula: "May the double column firmly stand." Scholars differ as to the function of these pillars. Some hold that they were support-pillars, others that they were isolated, decorative columns. Stade,[3] in his restoration of the temple, regards them as support-pillars, standing in the doorway. So also Hurlbut and Vogüé.[4] In the Turin Museum there is a portable tabernacle of painted wood. It comes from the nineteenth dynasty in Egypt. In front are two round pillars, with Hathor-headed capitals, standing a short distance from the entrance and supporting a small roof.[5] Notice also Renan's observation of the support-pillars in El Maabed at Amrit, mentioned above. Thesec ases of support-pillars in front are, however, found only in smaller tabernacles, and not in large temples. They are a part of a very fitting portico, which takes the place of the vestibule in the larger temples.

Ferguson,[6] regarding it absurd that pillars of the size of Jachin and Boaz could have been made by any brassfounder of antiquity, suggests that there was above the door a lattice work or screen, like those of the Indian temples, supported by two pillars, twelve cubits apart, not more than a cubit in diameter. The purpose of such a screen would be to admit light into the Holy Place. The chief objection to this theory is that the biblical accounts, which are describing these pillars in the smallest details, say absolutely nothing of such a screen, which would, according to this view, be the most important part of the elaborate decoration.

[1]  "Amen has received the lifting up of his beauty." Building Inscription of Amenhotep III., *L. D.*, III: 71*a*, l. 9.

[2] 1 Kings 7: 21.

[3] Stade, *Geschichte Israels*, I: 332.

[4] De Vogüé, *Le Temple*, Plate XIV.

[5] Perrot and Chipiez, *Hist. of Art in Ancient Egypt*, I: 354, Fig. 210.

[6] Ferguson, *History of Architecture*, I: 213.

Schick[1] has shown conclusively that the pillars were isolated. So also De Saulcy,[2] Benzinger,[3] Perrot and Chipiez,[4] and others. Similar isolated columns we find at Lagash,[5] in the temple of Kalaat-Fakra,[6] in the temple of Melkart at Tyre,[7] the Baal pillars in Malta,[8] the already mentioned pillars at Paphos,[9] and those on the Carthaginian stela.[10] In a terra-cotta model of the temple at Dali, Cyprus, now in the Louvre collection, we find likewise two isolated pillars with capitals in the shape of an open flower.[11]

The picture of the temple on the bottom of the glass bowl found at Rome, which has been mentioned above, shows clearly that the traditions of the Jews, even at as late a date as the close of the third century A. D., maintained that these pillars were isolated. They are distinguished from the other columns, not only by their position, but also in their color, one being red and the other brown, while the other columns are white. These pillars are placed at different levels, one of them not resting in its socket. And the way they are turned shows clearly that it was the artist's intention to show that they were isolated.

In the center of the great ptolemaic court at Karnak there are ten isolated pillars, and the distance from them to the nearest columns is so great that it would have been impossible to span it over either with stone or wood, and this has led Ebers[12] and others to regard them as simply ornamental pillars like Jachin and Boaz. But it is more likely that it was the intention of Ptolemy Philopator, whose cartouche is found on them, to add a new hypostyle hall to the famous temple, and that, when the pylons were up and the work on the columns had begun, he found that the hall was so enormous, and it would take so much money to complete it, that the work was abandoned at this point and was never finished. If so, these columns were meant to be support-pillars. A further proof of this is the fact that the top is so shaped that one would naturally suppose that something should rest on

[1] SCHICK, *Die Stiftshütte, der Tempel in Jerusalem und der Tempelplatz der Jetztzeit*, pp. 82, 83.

[2] DE SAULCY, *Histoire de l'art Judaique*, 1864. Plan du Temple de Solomon, K. L.

[3] BENZINGER, *Hebräische Archäologie*, p. 245. He makes them isolated, but placed inside the vestibule.

[4] PERROT AND CHIPIEZ, *History of Art in Sardinia and Judea*, I: 235.

[5] DE SARZEC, *Découvertes en Chaldée*, pp. 62–4. [6] RENAN, *Mission en Phénécie*, p. 335, 336.

[7] HERODOTUS, II : 44. One of gold and one of lapis lazuli.

[8] MAX OHNEFALSCH-RICHTER, *Kypros*, p. 186. [9] See chap. I.

[10] *Corpus Inscriptionum Semiticarum*, I : 281.

[11] *Beiträge zur Assyriologie*, IV : 2. Article by FRIEDRICH, "Die Ausgrabungen von Sendshirli," p. 236, Fig. 1.

[12] EBERS, *Aegypten im Bild und Wort*, II . 331.

it. Those who regard them as isolated, ornamental pillars, even suggest that some statue or other emblem was to be placed on the top.[1]

The two pillars were made of brass, and measured 18 cubits in height, and had a circumference of 12 cubits.[2] From 1 Kings 7 : 16[3] we would judge that the shafts and the capitals were made separately and then put together. The height of the capital was 5 cubits, thus the shaft would be 13 cubits high. This would perhaps include the height of the plinth on which it stood. The exact appearance of the shaft we do not know. It was probably very plain, for otherwise it would be most likely that an elaborate description of it would occur, as in the case of the capitals.

The capital was intended to resemble a lily in bloom,[4] consisting of two parts, the "calyx" 1 cubit high, and the petals 4 cubits high.[5] The "calyx" was covered with an ornament in shape of a network,[6] and at both upper and lower end there was a row of pomegranates numbering two hundred. From the lower row was suspended a chain forming seven wreaths or semi-loops.[7] From this "calyx" the petals of the lily spread out, forming a large cup. In the various attempts at restoration, the capital is usually represented as a bud,[8] but it takes a vivid imagination to discover the lily shape. They are more like an asparagus stalk.

5. SIMILAR PILLARS IN OTHER TEMPLES.

We have already mentioned the square brick pillars in front of the Assyrio-Babylonian temples, particularly at Nippur and Lagash. The columns of Paphos have also been referred to, but a word ought to be said about their capitals. They consist of two slender stems surmounted by globes. They might be taken for the stalk and bud of a flower, but they resemble more the very common sun-globe.[9] Strabo[10] speaks of similar phalluses with fork-shaped capitals in the temple of Atargatis in Hieropolis in upper Syria.

1 PERROT AND CHIPIEZ, *Hist. of Art in Ancient Egypt*, II : 144.

2 The Chronicler, with his usual exaggeration, makes the height 35 cubits. 2 Chron. 3 : 15.

3 Also 2 Kings 25 : 16, 17; Jer. 52 : 21–23. 5 1 Kings 7 : 19.

4 1 Kings 7 : 19. The same figure is also found in the Molten Sea. Lily-shaped capitals are also found on the columns in the great hall at Karnak and in the hypostyle hall at Rameseum.

6 Naturally suggesting the leaves which made up the calyx. 7 1 Kings 7 : 16–20.

8 STADE, *Geschichte Israels*, I : 332. BENZINGER, *Hebräische Archäologie*, p. 245. RIEHM, *Handwörterbuch des biblischen Altertums*, 2d ed., II : p. 1657.

9 The pillars on the Carthaginian stela have also a capital consisting of a globe, though it is surmounted by a bull's horns. *Corpus Inscriptionum Semiticarum*, I : 281.

10 STRABO, XVI, i : 27.

In Egypt the obelisks take the part which the columns in the temples of other nations occupy. They consist of a monolithic shaft[1] with four sides, gradually diminishing in size, and ending in a small pyramidion. The ancient appearance of these monuments was very different, for it is certain that the pyramidion at least was covered with metal.[2]

There is still another kind of sacred pillars in Egypt to deal with. At the close of the festival of Ptah-Sokaris-Osiris occurred the "erection of the pillar of *d*d," when the king, having sacrificed to Osiris, a mummified figure, bearing on his head the sign of the *d*d-pillar, proceeded to raise a figure of this shape lying on the ground. It was erected with ropes, a priest officiating. Then followed a season of rejoicing. But it is the shape of this pillar rather than the festival in which we are interested at this time. It occurs frequently on the monuments, and, according to Erman,[3] was the sign of the god of Dedu, a town in the Delta, later on called Busiris. What was the origin of this sign? What was the hieroglyph meant to represent? Some hold that it represents a nilometer, but this is scarcely a satisfactory explanation. Dr. Breasted[4] suggests that the lower part is an altar,[5] and the upper part is meant to show that there were vessels containing offerings placed upon it. The Egyptian artist knew nothing of perspective, and his only way to show that there were several vessels on the altar would be to put one upon the other. This seems a very plausible explanation, and it is easy to understand how in a later age the above-mentioned custom arose, when once this hieroglyph was recognized as the sign of the god of Dedu, irrespective of its origin.[6] If this explanation is correct, it is clear that the *d*d-pillar is not of the same nature as the other pillars mentioned above, and yet it may shed some light on the origin of columns of this kind — that they stand as a sign of some deity.[7]

Thus we have observed that nearly all temples in the Semitic world

1 So also the columns of Kaalat-Fakra. "Il y a, en effet, à Fakra, comme dans plusieurs outres constructions du Libanon et de Galilée, de double colonnes monolithes." RENAN, *Mission en Phénécie*, p. 336.

2 "Making for him two great obelisks of granite stone of the southern region, half of the upper part with electrum." From the south side of Hatshepsowet's obelisk at Karnak.

3 ERMAN, *Life in Ancient Egypt*, p. 260.

4 In a class-room recitation.

5 It is the exact shape of an Egyptian altar.

6 The same explanation could be used in regard to the cone-like pictures on the coins of Byblos and Paphos, that they were altars with a cone — possibly a sign of a bread, as an offering, or a phallus — placed upon it.

7 The Baal pillar which Jehu destroyed (2 Kings 10: 26, 27) may have served the same function as the *d*d-pillar.

had two columns of some kind near the entrance. They vary somewhat in shape, but all of them seem to express the same idea. They are the emblems of the deity, and would probably indicate phallic worship,[1] which seems to have been found in all these ancient nations.

6. THE VESTIBULE.

The first part of the building was a vestibule, or porch, as it is usually called. It was 20 cubits long, *i. e.*, the same as the width of the house, and 10 cubits broad, *i. e.*, from the Holy Place outward,[2] and 120 cubits high,[3] which of course is an exaggeration. The largest pylon at Karnak is only 146 feet. Though the inside measure of the length was that of the width of the Holy Place, it is not stated how broad the masonry was on either side, and it is quite possible that it extended beyond the width of the temple like the Egyptian pylons, which also form a small vestibule in the center. Vogüé makes it a single pylon with staircases leading up to the roof.[4] De Saulcy[5] makes it a double pylon with the pillars in front, while Benzinger and Riehm only have a single room not in shape of any pylon at all. That there was a chamber in the pylon may easily be inferred from Jer. 36 : 10.

7. THE DOORS.

The width of the doors leading to the Holy Place was a fourth of the wall, according to 1 Kings 6 : 33. The entire size of the wall was 20 by 30 cubits, or 600 square cubits. A fourth of this would make 150 square cubits, hence there would be in all probability a door-opening, including the posts and lintel, of 10 by 15 cubits. Regarding the posts and the lintel 1 cubit wide each, we would have a door-opening of 8 by 14 cubits. There were double doors, and each door had two divisions,[6] hence they were folding doors. According to this calculation the size of each division would be 2 by 7 cubits, which is very plausible. The doors were made of fir wood and the posts and lintel of olive wood,[7] and they were adorned with carvings in harmony with the rest of the decorations. The doors swung on golden hinges.[8]

1 It is singular that the word which has been used to indicate the "calyx" is בֶּטֶן, which means belly, womb. But it may have been the best word to indicate the shape, while גָּבִיעַ or גֵּבַע, which would have been more appropriate, would have been too general and meant any kind of calyx.

2 1 Kings 6 : 3. Ezek. 40 : 7 f and 41 : 15 would seem to indicate that there were two pylons in his temple, and he may have based the conception on his observation of the Temple of Solomon. There were guardrooms in them as in the Egyptian pylons.

3 2 Chron. 3 : 4.

4 Vogüé, *Temple de Jérusalem*, pp. 27 f.

5 De Saulcy, *L'art Judaique*, pp. 193 f.

6 1 Kings 6 : 34.

7 1 Kings 6 : 33 f.

8 1 Kings 7 : 50.

8. THE HOLY PLACE.

Next to the vestibule was the Holy Place. It is also called "the great house."[1] Its dimensions were: 40 cubits long, 20 cubits wide, and 30 cubits high.[2] These numbers probably indicate the interior dimensions. The entrance door from the vestibule has already been mentioned. A double folding door of olive wood led to the Holy of Holies. The door-opening, including the posts and lintel, occupied a fifth of the wall.[3] The entire size of the wall was 400 square cubits. The door-opening would then be 80 square cubits, or 8 cubits wide and 10 cubits high. The size of each division of the door would then be 1½ cubits by 7 cubits.

9. THE WINDOWS.

In 1 Kings 6:4 we read: "And he made for the house 'windows' of fixed lattice work." Where were these openings or "windows" situated? It is self-evident that they could not have been on the sides of the walls, because there were the surrounding chambers. It must therefore have been above these chambers. That they were not in the ceiling is clear from the fact that the roof was covered with cedar planks. They may have been long, slanting slits along the edge of the ceiling, but this could hardly be called lattice work.[4] It is more probable that there was above the Holy Place a system of gratings like that of the hypostyle hall in Karnak. The roof in the center of that hall was higher than on the sides, and the walls which supported this central roof were made of stone slabs in which there were narrow slits through which the light could enter.[5] These stones were 16 feet high, and the slits 6 feet high and 10 inches wide. Such a system of lighting could easily be effected by extending the side walls, but then we meet two other problems which must be solved first:

Were there chambers above the Holy Place, and were there support-pillars in this hall?[6] We know that the Holy of Holies was 20 cubits high, and that the surrounding chambers would reach about the same height. Now the cedar partition between the Holy Place and the Holy of Holies was built from the floor to the beams,[7] hence there

[1] 2 Chron. 3:5. [2] 1 Kings 6:17. [3] 1 Kings 6:31.

[4] Such was the method of admitting the light into the Temple of the Sphinx, traces of which have been found in the walls on each side of the main hall. MASPERO, *Manual of Egyptian Archæology*, p. 66.

[5] So also in the Temple of Khonsu, PERROT AND CHIPIEZ, *History of Art in Ancient Egypt*, I:166. This would come closer to the Hebrew "openings of the fixed row of beams" than "windows of fixed lattice work."

[6] Josephus mentions such rooms in *Ant.*, VIII:iii:1, 2.

[7] 1 Kings 6:16. Following the LXX, for "from the floor to the walls" would hardly give sense.

must have been beams across this hall at the height of 20 cubits. These beams might be regarded as supporting the floor of such upper chambers. But the difficulty with this theory is that the Holy Place is reported to have been 30 cubits high, and the problem of the windows would still be unsolved. The partition between the Holy Place and the Holy of Holies could not have been very thick[1] and hardly strong enough to support the ten remaining cubits of the western wall of the Holy Place. Hence there is a demand for a strong beam at this height. But a beam spanning a distance of 20 cubits would have to be enormously large in order not to sag, not only from its own weight but from the weight of the wall above as well. Hence we would of necessity come to the conclusion that there must have been pillars to support it. And besides, the text does not say the beam, but "from the floor to the beams." The natural inference would be that there were possibly three beams across, whose ends rested on such columns.

The only explanation would then be that there was in Solomon's Temple a superstructure like those in the hypostyle halls of Karnak and Khonsu, 10 cubits high,[2] resting on a row of columns. This arrangement would extend the roof of the side chambers over the Holy Place to the colonnade, perhaps 5 cubits on each side. This would make it easier to span the roof, making it 10 instead of 20 cubits, which would give it a more proportionate appearance than the narrow roof of the chambers alone. Thus the problem of admitting light almost forces us to accept the theory that there were support-pillars in the Holy Place. It may be the non-mention of any interior pillars in the narratives of both the Kings and the Chronicles that has caused their omission in nearly all the attempts at showing the plan of the building. Ferguson,[3] however, writing from an architect's point of view, argues most earnestly for the existence of interior pillars. Reasoning from analogy, he thinks that just as in the tabernacle there must have been a row of central poles supporting the ridge-pole, so there must have been a colonnade in the temple, supporting the roof. But granted that this arrangement of the poles may have been necessary for the

[1] The whole length of the temple inside is given in 1 Kings 6:2 as 60 cubits, while the Holy Place and the Oracle are respectively 40 and 20 cubits long. Hence no thickness of the partition is taken into account.

[2] The number given as the height of the Holy Place would mean that it was 30 cubits at its highest point. The obscure passage in 1 Chron. 28:11, speaking of the "upper rooms," may perhaps refer to chambers in the pylons. But even if the space above the Holy Place was meant, the expression "upper room" would perhaps be the best words to designate this floorless chamber. This superstructure is in no way alluded to in the Biblical descriptions of the temple.

[3] FERGUSON, *The Temple of Jerusalem*, pp. 28 f.

tabernacle, still it does not follow that there must be pillars in the temple, which had strong walls on which the beams of the roof could rest. But what he says about the sagging of the beams may be true, and certainly support-pillars would greatly aid in making the roof strong and durable. As to the artistic appearance of the hall, Ferguson is undoubtedly right that it would be greatly improved by this arrangement of columns, forming natural divisions in which the tables could stand,[1] besides making the approach to the Holy of Holies more beautiful. There may have been ten columns, five in each row, and 10 cubits between the rows. A further indication of the existence of pillars in the Holy Place is the mention of the "almug" trees which Hiram's navy brought in great plenty from Ophir, and which Solomon used for pillars in the House of God.[2] It could not have been for Jachin and Boaz, for they were of brass, nor the door posts, for they were of olivewood; so it seems quite possible that they were brought for support-pillars, and they would surely be in harmony with the wood trimmings of the interior. It may have been these columns that are referred to when Hezikiah cut the gold from the pillars in the House of the Lord and gave to the Assyrian King.[3]

It has already been pointed out that the Assyrian Naos, in front of the papakhu, corresponds to the Holy Place of Solomon's Temple. The fact that there are no columns mentioned in that hall would make it correspond closely to the description of the temple. But if there were of necessity pillars in the Holy Place, it would not only correspond to the hypostyle hall of the Egyptian temple, which it undoubtedly does, but it would even have the same appearance.

The furniture in this hall was five tables on each side on which stood as many golden candlesticks, the golden table of shewbread, and the golden altar of incense at the entrance to the Holy of Holies.

10. THE HOLY OF HOLIES.

The innermost part of the temple was the Holy of Holies or Oracle. Its dimensions were: length, 20 cubits; width, 20 cubits; and height, 20 cubits; thus forming a perfect cube.[4] The partition wall between the Holy Place and the Holy of Holies was of cedar planks.[5] The doors have already been mentioned. This hall was entirely dark. It was the supposed dwelling place of the deity. The ark of the covenant stood under the wings of two overshadowing cherubim. There

[1] The tables would also be better protected against rain if there was the small side roof mentioned above.

[2] 1 Kings 10:12. [3] 2 Kings 18:16. [4] 1 Kings 6: 19. [5] 1 Kings 6: 16.

would be no necessity for support-pillars in this hall. The Oracle of Solomon's Temple corresponds clearly to the papakhu of the Assyrian and the adytum of the Egyptian temple.

II. THE SURROUNDING CHAMBERS.

One of the chief characteristics of the Assyrio-Babylonian, as well as the Egyptian, temples was the system of numerous chambers which surrounded the sanctuary and the naos or hypostyle hall. The grottoes discovered by Renan in the Phœnician temples may have been similarly situated, and the semicircular chambers found by Cesnola in Curium on Cyprus served clearly the same purpose. It was in these chambers Cesnola discovered his marvelous collection of Cypriote treasures,[1] which would indicate that these crypts were used, partly at least, for the same purpose as the chambers of Solomon's Temple.[2] The treasures were probably stored on the first floor, where they were easily accessible. This would also be corroborated by the find at Curium. The upper stories would be used for dwellings of the priests and Levites.[3]

There are differences of opinion as to the number and sizes of these chambers in Solomon's Temple. Neither the narrative in Kings nor that in the Chronicles gives us the exact number. If the analogy from Ezekiel's temple should be adopted there would be ninety, being three floors of thirty each.[4] This is the usual supposition. But Ezekiel's temple varies so much from Solomon's in other respects that this number cannot be accepted with absolute certainty. Josephus[5] makes them the same, thirty on each floor, and adds also that they were 5 by 5 cubits, hence perfect cubes. So also most of the restorers of the temple plan.[6] Calculating on this basis, we would have on the ground floor, on one side of the house up to the outer corner of the western wall, twelve chambers, and on the western side six. The length of the house inside was 60 cubits. Adding 6 cubits as the thickness of the western wall, the entire length on one side would be 66 cubits. There would be twelve partitions. Regarding these as ½ cubit each, or 6 cubits in all, and subtracting this number, we would find that the length of each room would be 5 cubits. So far this corresponds to Josephus's statement. But these measurements fail when we calculate

1 CESNOLA, *Cyprus*, pp. 342, 343. 2 1 Chron. 28: 12.

3 1 Chron. 28: 13. 2 Chron. 3: 9 speaks of the ornamentations of the upper chambers, which would indicate that they were used for dwelling-places.

4 Ezek. 41: 6. 5 JOSEPHUS, *Ant.*, VIII, iii: 2.

6 DE SAULCY, *L'art Judaique*, pp. 193 f.; RIEHM, *Handwörterbuch des biblischen Altertums*, 2d ed., II, p. 1652; VOGÜÉ, *Temple de Jérusalem*, pp. 27 f., has thirty-three on each floor.

the length of the six chambers behind the Oracle. If these chambers were 5 cubits, and the five partitions 2½ cubits, we would have 32½ cubits as the combined length. But 20 cubits, the width of the Oracle, 12 cubits, the width of the two walls, and 10 cubits, the width of the two chambers, would make 42 cubits. Hence Josephus's statement is not fully correct. It is clear that, since the text does not gives us the length of these rooms, it is simply a matter of conjecture. If so, it would seem a great exaggeration to have thirty or more chambers on each floor, when the Temple of Edfu had only nineteen.[1] Ferguson,[2] following the Talmud, makes it thirty-eight chambers in all, but it is difficult to find a suitable division in the arrangement of these chambers.

The following conjecture may, perhaps, be more plausible:

The entire length of the side was 66 cubits, six rooms, 10 cubits long, together with partitions would make 63 cubits. The last partition would be 3 cubits from the corner, thus making each corner-room a little broader at one end. The entire width was 42 cubits, four rooms, 10 cubits long, together with partitions, would take exactly this space. Thus we would have forty-eight rooms in all, as follows:

Floor.	Rooms.	Length.	Width.	Height.
First	16	10 cubits	5 cubits	5 cubits
Second	16	10	6	5
Third	16	10	7	5

From this table we notice that the only break in the uniformity of measurements is in the width, which increased one cubit with each story.[3] The explanation of this is that the beams of the roof of each story were not allowed to rest in the wall of the temple itself,[4] but along the sides of the temple walls there was built up a special wall for the chambers, being two cubits thick in the first and one cubit in the second story, thus allowing one cubit on each floor for the beams to rest on.

In regard to the arrangement of the surrounding chambers, there is a fundamental difference in the Egyptian and the Jerusalem temples. The Egyptian chambers invariably have their door-openings towards the sanctuary, so that one enters them from the corridor which surrounds the adytum, while in Solomon's Temple there seems to be no

[1] See the plan of the Temple of Edfu in BAEDEKER'S *Egypt*, p. 310.

[2] FERGUSON, *Temples of Jerusalem*, pp. 31, 32.

[3] 1 Kings 6:6.

[4] This would also show why the Holy of Holies must be back of rather than inside the Holy Place, for in the latter case there would be "beams" resting in the walls, whereas in the former the beams would be in a way foundation- instead of roof-beams. Besides there is no account of a room above the Oracle, which would be formed if it was inside.

entrance from them into the sanctuary or even the Holy Place. In the middle of the right side of the temple there was an entrance to the chambers, and a winding staircase led to the upper chambers.[1] There were doors connecting all the rooms.

Josephus[2] speaks of a staircase in the thickness of the temple wall which led to the upper rooms over the temple, "for it had no large door on the east end as the lower house had, but the entrances were by the sides through very small doors." Josephus evidently had in mind a superstructure like the one we have described before in connection with the windows, for he says just before: "The chambers reach a height equal to the house, for the upper part had no buildings about it." The problem of lighting the house does not seem to occur to him, and he took for granted that the superstructure must have been a chamber, and hence wrote of this staircase in the wall leading to it. And still it is not altogether improbable that there may have been a tradition concerning such a staircase which has been voiced in this statement by Josephus, for there was undoubtedly some contrivance by which the roof above the chambers could be reached. We find two such staircases in the walls of the Temple of Edfu leading up to the roof. This is, however, a mere conjecture.[3]

12. WAS THERE A GROVE AROUND THE TEMPLE?

We have already noticed the existence of gardens around the Egyptian temples. The Phœnician Aštarte groves are well known. Was there such a grove around the temple in Jerusalem? That there were Baal groves in Israel, and that in the days of degeneracy their abominations were brought into the temple, is clear from the narratives in the Books of Kings, but that there were trees around the temple is not clearly stated. Still there may have been trees between the temple and the surrounding walls, even though the writers do not mention them. Some figures of speech in the Psalms have been interpreted to indicate the existence of such a grove around the temple. It would certainly add a great deal to the beauty of the surroundings.

[1] 1 Kings 6:8. [2] JOSEPHUS, *Ant.*, VIII, iii:1, 2.

[3] Friedrich in his *Tempel und Palast Salomo's, Denkmäler Phönikischer Kunst* (Ihnsbruck, 1887), pp. 12 f., regards these chambers as situated inside the walls of the Holy Place, an interior, wooden structure. Finding the space too narrow, he makes the first floor merely a colonnade. But where is the door leading to these chambers and the winding staircase? How is light admitted into the Holy Place? Why could not these chambers have been arranged as those in the Egyptian temples?

CHAPTER IV.

FURNITURE AND DECORATIONS.

I. THE ALTAR.

It is the intention, in this chapter, to place the various pieces of furniture in Solomon's Temple in the light of archæology.

There were two altars in the temple, one in the center of the Priests' Court, the other before the entrance to the Holy of Holies. The rock on which the former altar was placed is undoubtedly the same over which the present Dome of the Rock stands, and was probably the place on which David erected his altar that now was supplanted by a more elaborate one, the artistic work of Hiram Abu. At the base it was 20 cubits long and 20 cubits broad, and its height was 10 cubits.[1] It may be possible that Ezekiel's vision of the altar was based on his observation of Solomon's Temple, and if so, we may receive further knowledge about it from his description. According to Ezekiel the altar proper was 12 cubits long, 12 cubits broad, and 4 cubits high. This rested upon a stone platform, 14 cubits long, 14 cubits broad, and 4 cubits high, hence there was a ledge around the altar of one cubit on which the priest might stand. This platform rested on a second platform, 16 cubits long, 16 cubits broad, and 2 cubits high. Along the base of this platform, as well as on the highest, ran a gutter, 1 cubit broad and 1 cubit deep, which was intended to receive the blood of the sacrifice. On the eastern side was a staircase leading up to the altar. The platforms may, however, be only settles cut in the rock, so as to give the appearance of a double platform.[2] It is not necessary to make thorough examination of the measurements of Ezekiel's altar to see how impossible they are. The altar proper is said to be 4 cubits high. That would be about 6 feet, or reach almost above the head of the priest standing on the upper settle. There is

[1] 2 Chron. 4: 1.

[2] The whole structure would look somewhat like an Assyrian zikkurat in miniature. H. B. Greene has examined the rock altar at Sara and "found it a rock, 8 feet high and 8 feet in diameter at the base. With the exception of the top, it is in a state of nature. The top has been cut a little, making two platforms of a foot in width, one platform being a foot above the other. . . . On the top of the altar were ten cup-shaped hollows, from 2 to 8 inches in diameter." GREENE, "Hebrew Rock Altars," *Biblical World*, 1897, Vol. IX, p. 332. Similar altars were also found at Der Eyub, Bet Malhsîr, Saffa, and Chatula. For a similar step-like monument at Arvad, see RENAN, *Mission en Phénécie*, Plates XI, XII.

not room for steps on the settle, for it is only 1 cubit or 1½ feet wide. It is therefore impossible to know the exact measurements, but the general appearance of the altar may have been truly pictured by Ezekiel. The altar proper was overlaid with brass, and at each corner of this "table and hearth of the Lord" was a projection, called the "horn" of the altar, to which the animal may have been fastened during the sacrifice. The horns, according to Stade, represents the beginning of carving the stone into the shape of an ox. Robertson Smith[1] regards them as a substitute of the actual horns of the animal. In his great work on Syria, Vogüé[2] has a picture of a square altar from the time of Herod. On the sides of this altar are sculptured rams placed in such a way that the horns form the corners of the altar. The projections on the altar in the coin of Byblos have clearly the shape of a bull's horns.[3]

The altar is, as the Hebrew word indicates, "a place of sacrifice," and around it there grew up shrines, some of which have been very prominent. Palestine has a large number of such altars. Tacitus[4] tells us that Vespasian visited the oracle on Mount Carmel. Renan found at Belat, south of Tyre, one of these ancient sanctuaries "surrounded by laurel trees, which may have been the groves by which the altar was encircled."[5] At Saida Renan[6] discovered, among other things, a peculiarly shaped altar. It stood on a broad pedestal on which rested a rectangular stone that forms the body of the altar. On the top of it was a square stone slab, the table of the altar. Thus the altar itself is not unlike the Egyptian and almost a fac-simile of the altar at Jerusalem, but on the top of it we find a conical stone. This may explain the appearance of the altar on the Paphos and Byblos coins. In Cyprus Cesnola[7] found a small altar, only eleven inches high and five inches wide. Its shape as well as its ornamentations show clearly an Egyptian influence, being exactly like the lower part of the *d*d-pillar.

In Assyria and Babylonia the oldest altars were made of sun-dried brick, as, for instance, the one found at Nippur.[8] The prevalent type

1 Robertson Smith, *Religion of the Semites*, p. 436.

2 Vogüé, *Syrie Centrale Architecture Civile et Religieuse*, Plate 2.

3 On a Carthaginian votive stela (Perrot and Chipiez, *Hist. of Art in Phœnicia and Cyprus*, I: 80) we find a figure which is usually explained as being a goddess in human shape, but which clearly is an altar, the horns of which are very prominent. That which is taken for the head is simply a vessel on the top of it, standing in Egyptian fashion on edge to show the inside.

4 Tacitus, II: 78.

5 Renan, *Mission en Phénécie*, p. 687, Plate XXII.

6 *Ibid.*, Plate XLIII·1.

7 Cesnola, *Salaminia*, p. 100.

8 Hilprecht, *Old Bab. Inscriptions*, I, 2, p. 24, Acc. to Jastrow, *Rel. of Bab. and Ass.*, p. 651.

in Assyria, later on, was a limestone or alabaster altar. The base of the altar was a solid stone with a circular or oblong plate resting on it. Here we find also the triangular altar.[1] A sample of such an altar is the one from Khorsabad, now in the Louvre. It rests on a broad plinth, also triangular in shape, and is supported at each corner by a lion's paw. The table is circular and bears a cuneiform inscription on the side. The Nimroud altar at the British Museum differs from the rest in having on each end a roll. The shape is like that of the Roman sarcophagi in a later age. The table of the altar was often adorned with crenellations, so usual in all Assyrian architecture. The same monument occurs frequently throughout all Phœnicia.[2]

2. THE MOLTEN SEA.

In the southeastern corner[3] of the upper court was situated the huge, brazen sea, supported by twelve brazen oxen, three looking in each direction.[4] The height of the basin itself was 5 cubits, the diameter 10 cubits, and the circumference 30 cubits, its thickness 1 palm.[5] It contained 200 baths. The shape of the large vessel was that of an open lily or lotus flower.[6] Below the rim were two rows of knobs corresponding to the pomegranates on the pillars, ten on each cubit.[7] The size of the oxen on which the vessel rested is not given. It is quite probable that behind the oxen there was a block of masonry which helped to support it.

As the rule of the Hiram of the Bible is known with certainty from inscriptions to have extended over parts of Cyprus, and in particular just over the most ancient copper mine district between Amathus and Tamassos, we may assume with safety that the great bulk of the bronze and copper vessels for Solomon's Temple were either actually made in Cyprus or made by Cyprian masters in Phœnicia or Jerusalem.[8]

In Assyria we find a piece of furniture called "Apsu," or "the deep," which evidently corresponds to the Molten Sea. It was cut of large blocks of stone and was beautifully decorated.[9] That it had a

1 PERROT AND CHIPIEZ, *Hist. of Art in Chaldea and Ass.*, I: 257.

2 RENAN, *Mission en Phénécie*, pp. 72, 162–4, 175. Plates XI, XII, XIII, XX, XXII. May we not suppose that the border around the settle in Ezekiel's altar had this shape? Ezek. 43: 17.

3 Not, as Ferguson supposes, between the altar and the Porch. FERGUSON, *The Temples of Jerusalem*, p. 37; 1 Kings 7: 39.

4 1 Kings 7: 24.

5 1 Kings 7: 23. A circumference of 10 cubits' diameter would be 31.40 cubits, while 30 cubits circumference would have a diameter of 9.55 cubits.

6 1 Kings 7: 26.

7 1 Kings 7: 24.

8 MAX OHNEFALSCH-RICHTER, *Kypros*, pp. 444 f.

9 JASTROW, *Rel. of Bab. and Ass.*, p. 653.

symbolical significance is almost certain. If we remember that the zikkurat stood for the mountain, it is possible that this vessel stood for the sea, hence a symbolic representation of the earth.[1]

Similarly in Phœnicia and Cyprus we find remains of large vessels used in the temples. The best example of them is the famous limestone vase of Amathus, now in the Louvre. It is spheroidal in shape and has a small base and low rim around the circular mouth. On the sides are four large handles, inside of which is a picture of a bull. The vessel is 6 feet 2 inches high and the greatest diameter is 9 feet 2 inches. Remembering that Solomon's Sea was 15 feet in diameter and 7½ feet in height, we find that this one, though not coming near it in actual dimensions, yet it is the best representation of such a vessel and was evidently used for the same purpose. The place in Amathus, where this vessel was found, resembles Jerusalem in this respect that it was a high hill and that there was a scarcity of springs, hence the necessity of filling this vessel with water for the oblutions in the temple. In the rainy season the vessels were easily filled, otherwise the water was brought from the city reservoir on the backs of donkeys.

Whatever may have been the method of supplying the water to the Molten Sea, it seems very plausible that there were taps near the bottom for emptying the water into the small, movable lavers by means of which water was brought to the altar. The angles between the oxen would be the most suitable place for them.

In Amrit Renan[2] made a discovery which may explain the purpose of the large vessel. At the Ain-el-Hayyit, or "Fountain of the Serpent," he found a small, monolithic tabernacle resting on a large stone cube, and this in turn on a smaller stone. Just opposite it, on the other side the marsh, there were remnants of a similar tabernacle. These shrines had their openings facing each other, so that in antiquity, when perhaps the water formed a lake rather than marsh as at present, the only access to these sanctuaries was by means of boats. The cornice of uræus serpents and the large winged sun-disc in the ceiling show a clear Egyptian influence in the adornment of this tabernacle. It does not take much imagination to see that, because of the position of the two shrines, we have in Phœnicia also a sample of the temple lakes. In Panaghia Phaneromeni on Cyprus we find that the sanctuary was built around a sacred fountain, just as the Temple of the

[1] Remembering the zikkurat-like shape of the altar in Jerusalem, we would have the same symbolism represented in Solomon's Temple also.

[2] RENAN, *Mission en Phénécie*, pp. 68–70.

Sphinx might have been erected around the well found in its innermost hall.

Thus we may notice that throughout the Semitic world there are in nearly all the temples evidences of the existence of a large quantity of water. It is also clear that where it was possible these waters were collected into small artificial lakes, but that when the temple was situated on a hill, where such an arrangement may have been impossible, we find instead these huge vessels, which are the nearest approach to it. Just as the "Apsu" in Assyria, the Molten Sea in Jerusalem, the giant vase in Amathus, the sacred fountain in Lacarna, and the lake of Amrit were not only in the immediate vicinity of the temple, but within the sacred precincts, so were also the Egyptian lakes within the outer temple walls.

The purpose of these lakes was not merely for the sake of ablutions, because then they ought to have been outside, so that the worshipers might pass through the necessary ceremonies of ablution before entering the sacred grounds, but these lakes may have played a part in the ritual. We know of the sacred boats in Egypt which were actually used on the Nile and on the temple-lakes; and the fact that the only approach to the tabernacles of Ain-el-Hayyit was by boats may indicate that small journeys were made to imitate the voyages of the sun-god in the heavens.

3. THE LAVERS.

It has already been observed that there were, besides the Molten Sea, ten smaller, movable vessels or lavers. The dimensions of the base on which the laver rested are given as follows: Length 4 cubits, breadth 4 cubits, height 3 cubits.[1]

The laver was, no doubt, an open, cup-like vessel from which the water could easily be drawn during the sacrifice. It contained 40 baths,[2] and "every laver was four cubits," by which probably was meant its diameter at the brim. The description of the base in 1 Kings 7:28 f. is so vague and unsatisfactory that it is difficult to form a correct idea of its appearance, and hence any attempt at a restoration would be merely a matter of conjecture. It seems evident, however, that the base was a box, 4 cubits long, 4 cubits broad and 1½ cubits high;[3] that the laver rested in a cylinder, 1 cubit high, upon the top of the base, forming the appearance of a pedestal.[4] The wheels

[1] 1 Kings 7:27. [2] 1 Kings 7:28.

[3] The wheels being 1½ cubits high and the entire height 3 cubits.

[4] In Haskell Oriental Museum there are numerous Egyptian bases of cylindrical shape, supporting very large jars.

and their axle-trees rested on the extensions below the corner pieces, which in turn were braced by four cleats coming together to a point in the center of the floor. The base was profusely adorned with figures of lions, oxen, and cherubim, and hanging wreaths or chains. On the top, or on the sides perhaps, there were handles by which the motion of the base could be controlled.

The large terra-cotta vases found near the altar at Nippur[1] may have served the same purpose as these lavers. At Chytroi a basin has been found which may have been used in the same way. It was supported by two figures, one representing the sun-column, and the other the sun-image or a winged woman holding the winged sun-disc.[2]

4. THE TABLES.

There were in the Holy Place ten tables on which stood the ten candlesticks, five on each side. As to their size and appearance nothing is known. In the central aisle there stood the table of the shewbread. This was probably an altar for bread and libation offerings, as can easily be inferred from a similar table found at Tell-el-Amarna, which sustains several wine jars and a pile of bread. That a table of this kind was found in the later temple is clear from the representation of it on the Arch of Titus in Rome.[3]

5. THE CANDLESTICKS.

The ten candlesticks which stood on the tables were of pure gold and had the shape of a tree with seven branches, *i. e.*, the stem and three branches on each side. If the representation of it on the Arch of Titus in Rome is correct, we notice that the arms or branches, taken in pairs, formed segments of circles. At the point of departure these branches formed a little bowl in which the oil was kept. The tree-like shape of the candlesticks is undoubtedly a relic from the older sacred-tree worship.[4] So close is the resemblance between these trees and candelabra in the Assyrian inscriptions that, as Robertson

1 JASTROW, *Rel. of Bab. and Ass.*, p. 652. 2 MAX OHNEFALSCH-RICHTER, *Kypros*, p. 192.

3 PERROT AND CHIPIEZ, *Hist. of Art in Sardinia and Judea*, I: 248, 249, Figs. 160, 161. May we not discover in this the same kind of worship which produced the votive tablets in Egypt on which food was pictured? The form of these articles of food is, of course, a product of the Egyptian ka-belief. There is a close connection between the mastabah and the temple, and the table of shewbread may be for the latter what the votive tablet was for the mastabah. Just as the ka must have the pleasure of enjoying food, so must also the deity. It is the inevitable outcome of an anthropomorphic conception of the gods. One of the votive tablets in Haskell Museum has a gutter into which the libation was poured.

4 Among such sacred-trees the pomegranate holds a prominent place. It is the sacred tree of the Egyptian god Min, and occurs frequently in the inscriptions. MAX OHNEFALSCH-RICHTER, *Kypros*, p. 113. So also in the Cypriote decorations.

Smith[1] remarks, "in the most of them it is not easy to draw the line between the candelabrum and the sacred tree crowned with a star or crescent moon." The Candelabrum Tabarieh[2] is of the same shape as that in Solomon's Temple, except that the arms do not rise independent of each other, but are tied together by some kind of ornamentation. In Curium on Cyprus, Cesnola[3] found also a candlestick. It had a single stem ending in a round globe from which seven arms branched out. It seems to come nearest the description of the candlesticks in Jerusalem. If the stands on each side of the pavilion on the coin of Paphos should be regarded as candelabra,[4] as some have supposed, they certainly are entirely unlike those in Jerusalem. They would resemble more the bronze candelabrum in New York museum.[5]

Whatever may have been the origin of the candle-stick, and whatever its shape may have been, from the language of Zechariah it is evident that its function was not only to shed light, but rather to present certain truths by its symbolical character.

6. THE ARK.

In the Holy of Holies was the sacred ark, which was made to contain the tables of the law. It was an acacia chest,[6] 2½ cubits long, 1½ cubits broad, and 1½ cubits high. The ornaments on it consisted of gold coverings and a rim of gold at the top. Fastened to the four feet on which the chest rested were four rings, through which acacia staffs were drawn, by means of which it could be carried. The ark may not at that late date have had the shape of a boat, though it must have recalled the shape of the ark of Noah, but it seems most likely that the original intention was to have it represent a boat like those of Assyria and Egypt. It rested on a stone block in the Oracle.

Nearly all Semitic peoples in antiquity used the ceremony of carrying an ark, or a boat, in solemn processions.[7] In the Mesopotamian countries almost all the gods had their sacred boats. Gudea calls the ship he built for Nin-girsu "the one that rises up out of the dam of the deep." This name seems to suggest the myth of the journeys of a

1 ROBERTSON SMITH, *Religion of the Semites*, p. 488.

2 DE SAULCY, *Voyage*, Atlas Plate XLVI. 3 CESNOLA, *Cyprus*, Plate XXXII: 12.

4 Though they might just as well have been lavers, occupying the same position as the lavers in Solomon's Temple.

5 PERROT AND CHIPIEZ, *Hist. of Art in Phœnicia and Cyprus*, II: 412. 6 Exod. 25: 10 f.

7 It seems that when the idea of a boat had ceased to be emphasized, the thought of the divine emblem inclosed in it received more prominence, and hence it occurred that the statues of the gods, seated on thrones, were carried in procession. LAYARD, *Monuments of Nineveh*, 1st series, Plate LXV. Two men carry a chariot, richly adorned. BOTTA, *Monuments de Niniveh*, I, Plate XVII. See also Plate LXV.

sun-god. Marduk's ship was called "ship of light," which also may allude to a solar-myth. Bau's ship had the name "the ship of the brilliant offspring."[1] These richly adorned boats, which sometimes were so large that there was a tent for the god in them and that they were manned with captain and crew, were actually used on the water, as Jastrow suggests, according to certain ritualistic ceremonies in honor of the water-deity Ea, though we might just as well suppose that these journeys were made in imitation of the sun-god's voyages across the heavens.

In Phœnicia we find the same chest-like boat as the one in Jerusalem. The Molock and Baal worshipers had their sacred barks.

But it is in Egypt where we can go a step further back in the development of this custom. There we find both the small, ceremonial boat which was always carried, and the large, sacred boat, which was both carried and actually used on the temple lakes, and especially on the Nile, when the god was visiting the western regions.[2] Hence, out of the myth of the sun-god's journeys grew the custom of imitating these voyages by actual traveling across the Nile with the sacred boat. But in time, when this became tiresome, especially to carry the large boat from the temple to the water, and the significance of the voyages was partly lost sight of, it was easy to substitute the small boat, and by carrying it in procession pass through the same form of making the journeys, until this became a mere ceremony without any meaning, and hence, as among the Hebrews and the Phœnicians, the boat-shape gradually disappeared and the box alone was used. But while formerly the statue of the god was carried in the sacred boat in Egypt, we find in the chest of Yahweh simply the emblems of the deity, his words cut in stone.

7. THE CHERUBIM.

The ark was placed between two cherubim with outstretched wings. The height of the cherubim was ten cubits, and the distance between the points of their wings, when stretched out, was ten cubits, so that the right wing of the one touched the point of the other's left wing, while the other wings reached the walls. The figures were richly adorned with gold.[3] It is impossible to judge from this brief description what was the form of the statues themselves. It is not likely that

[1] JASTROW, *Rel. of Bab. and Ass.*, p. 655.

[3] 1 Kings 6: 23–28.

[2] A good example of such a sacred boat used on the Nile is found in the Field Columbian Museum. The name of the *wia* ship, which was the god's boat on the Nile, was "Amen Re is the chief strength," while that carried on land was called "Bearer of his beauty." The king's boat was called "Star of the two lands." *L. D.*, III: 71*a*, l. 16.

they were sphinx-shaped,[1] because all the presentations of the winged sphinx have the wings bent backward rather than spread out toward the sides. It must therefore have been a being standing upright. Whether it was a combination of man and some animal form,[2] or simply the statue of a winged man,[3] is not certain. The aversion in Israel against statues, especially that of a man, who was made in the image of God, seems to have been set aside in the case of these cherubim and the twelve oxen, so it is natural to suppose that no objection would be made against the man-like shape of the cherubim. The cherubim were one of the highest classes of angels in the Jewish angelology, and the usual conception of angels is that they are winged men, and this notion may have had its origin in the observation of these statues in the Holy of Holies.

Such figures are very common in the Assyrian decorations.[4] Winged animals and men are found in ancient decorations throughout all Syria. Cesnola found at Salamis, in Cyprus, a silver ring bearing the figures of the Egyptian goddess Pasht with outstretched wings, and another with a winged griffin.[5] The winged goddesses Isis and Nephtys occur frequently in Egyptian decorations.[6] Cheyne[7] regards them of Hittite origin. He further adds : "The Hittite griffin appears almost always, in contrast to many Babylonian representations, not as a fierce beast of prey, but seated in calm dignity like an irresistible guardian of holy things."

The origin of the cherubim goes further back than history, to the time when primitive man began to shape in his imagination figures combining parts of man and parts of animals, and animals of different kinds. Many were the grotesque figures which thus were formed that have survived in ancient sculpture and artistic drawings. We know that already in prehistoric times in Egypt the royal garb was a lion's hide, and that the lion's tail, even after the king began to use other

[1] Like those four sphinxes which guarded the sarcophagus found by Cesnola at Amathus. CESNOLA, *Cyprus*, p. 267.

[2] As the hawk-headed man found so frequently in Egyptian decorations and also at Nineveh. See BOTTA, *Monuments de Niniveh*, I, Plates LXXIV, LXXV. PLACE, *Niniveh*, Plate XLVI.

[3] As the profile picture of the guardian at Khorsabad with the wings spread out on both sides of him. BOTTA, *Monuments de Niniveh*, I, Plate XXVIII.

[4] PLACE, *Niniveh*, III, Plates XII–XVI. The one in Plate XII has a royal head; the arms are held in a position of offering. A pair of wings are stretched upward, while a second pair are pointing downward. From Plates XV and XVI we may judge that the wings form a part of a gown.

[5] CESNOLA, *Salaminia*, pp. 50, 51.

[6] The conception of the bah in Egyptian thought was that of a man-headed bird.

[7] Article on "Cherubim," in *Encyclopædia Biblica*.

garments, became one of the royal insignia.[1] Hence the king and the lion became identified with each other, the natural outcome of which was the combining of the king's head and a lion's body, and we have the sphinx. When once these figures of the sphinx had become so conventionalized that their origin was no longer thought of, other combinations might have been made to shape new and grotesque figures. The same process went on undoubtedly in other countries, and one is apt to borrow from another, perhaps even changing the figure by adding some new element. Thus we find in Assyria the winged sphinx, which was largely copied in Phœnicia. The artistic beauty of the wings made them the most prominent part, and soon animals of various kinds were adorned with wings, and consequently wings were also bestowed upon man. The next step, from cherubim to angels, seems inevitable.

Besides those pieces of furniture which we have described many smaller articles are mentioned in Kings, as flowers, lamps, tongs, bowls, snuffers, basons, spoons, and censers, all of pure gold.[2]

8. THE DECORATIONS.

The walls of all Oriental temples were profusely adorned with inscriptions or decorations.[3] Sometimes it was the simple form of a textile pattern, as in the Assyrian Naos; sometimes it was inscriptions telling of the royal builder's wonderful achievements, as in Egypt; and again it was merely decorations consisting of conventional figures borrowed from the temple walls of other nations, as in Phœnicia and Cyprus.

So also in Jerusalem. The Temple of Solomon was famous for its rich ornamentations. The whole interior of the house was trimmed with cedars, covering the entire walls.[4] The floor was laid with planks of fir. The ceiling, walls, and floors, as well as the doors, were beautifully carved and richly adorned with sheathings of gold.[5] That the carvings were of some definite design seems to be indicated by the knobs, chains, and such figures as palm trees, flowers, and cherubim.

We have already spoken of the pillars inside the house on which in all probability Hezekiah had placed some ornaments of gold. Just outside the harâm wall at Khorsabad, Place[6] found several fragments

[1] The assuming of the lion's tail was celebrated with great festivities.

[2] 1 Kings 7: 48–50.

[3] The Old Empire temples in Egypt are exceptions from this rule.

[4] 1 Kings 6: 15, 16, 18.

[5] The word used in the descriptions is "covered" or "overlaid." But it seems hardly possible that this was the case, but rather that the gold was "inlaid" in the figures or adorned the walls.

[6] PLACE, *Niniveh*, I, pp. 120–22, III, Plate LXXIII.

of a round cedar beam, covered with a sheathing of oxidized bronze, representing the scales on a fish, attached by large bronze nails. Not far from the same place he found a leaf of gold whose shape and size evidently show that it had been on the top of the bronze scales, the holes for the nails even fitting the proper places.

One of the most favorite designs throughout Egypt and western Asia was the winged sun-disc, or the winged globe, as above the gateway of every Egyptian temple, in the ceiling of the Amrit Tabernacle, or on the lintel at Byblos. The famous uræus serpent is also very prevalent in Phœnician art,[1] and sometimes combined with the winged globe,[2] as at Oum-el-Awamid.

Though insignificant when compared with the shrines of other Oriental nations, the Temple of Solomon was magnificent enough for Israel, and served its purpose well in the days of the kingdoms. Subsequently it became the basis of Ezekiel's ideal picture, still later it was restored at the return from the Babylonian captivity, and finally it was made the type of Herod's splendid temple.

[1] RENAN, *Mission en Phénécie*, Plates VI, IX, XXXII, LII, LIII, LV, pp. 26, 69, 70, 157, 158. 227, 365, 366, 541, 670, 671, 702, 703, 708, 841, 843, 844, 846, 851*a*.

[2] RENAN, *Mission en Phénécie*, p. 843, No. 73.

CHAPTER V.

THE GROWTH OF THE ORIENTAL TEMPLE.

I. THE MOUNTAIN HOME OF THE GOD.

From this study of the Temple of Solomon, in the light of other Oriental temples, we have noticed that there is a certain uniformity of plan and decoration in all the Semitic temples, indicating certain fundamental ideas common to all the Semitic nations, though they may be altered or modified in their expression in different localities, due to each nation's stage of development. Solomon's Temple was not a copy of the Egyptian temple, though there are certain similarities of plan; nor of the Assyrio-Babylonian, though the artistic decorations decidedly show such an influence; nor of the Phœnician, though there is a striking resemblance between the courts and those of Byblos and Paphos. But it combined the chief characteristics of all, and became the typical Semitic temple. Hence it would, perhaps, be of interest, in closing, to sketch briefly the growth of the Semitic temple.

The oldest temples of which we have remains are undoubtedly the zikkurat and the pyramid. It has already been shown how the zikkurat was meant to be an imitation of a mountain, thus indicating the prevalent notion that the god's home was on some mountain peak. At first there was only one plateau, but later on story after story was added, approaching closer and closer to the appearance of a mountain. The belief in the exaltedness of the deity found expression in the lofty zikkurat.

The origin of the pyramid was the mastabah or tomb, as is shown by the step-pyramid at Sakkara. One mastabah was placed upon another, whereupon a casing was laid outside, giving it its well-known pyramid shape, which also resembles a mountain peak, though this may not have been the intention, as in the case of the zikkurat. The mastabah was the home of the deceased. By magic the ka was made to enjoy all the privileges and pleasures that the deceased had enjoyed in life, and hence the mastabah was furnished as a real home. The pyramid, the royal tomb, was therefore the lofty home of the deceased king. But the king was considered a god, hence the pyramid was the mountain-like home of a god. The mastabah had not only the chamber in

which the sarcophagus rested, and the shaft through which the soul could come and go, but also a chapel where worship was conducted, as would naturally be the case in a land where ancestor-worship was so prevalent as in Egypt. It was therefore a kind of temple, even though it may have been of a private nature. In the pyramid we also find the chamber where the body was, and other chambers corresponding to the chapel of the mastabah. Just as the king as god was more exalted in life than his fellow-men, so must his temple-home be more glorious and lofty than theirs in the life to come.

Whether the zikkurat had its origin in the native rock, used as an altar, perhaps, which in a later time became the first plateau; whether the pyramid could trace its origin to the heap of sand thrown over the deceased, which in the course of development became the first mastabah; it is evident that the finished product, like Yahweh's Horeb, was the mountain home of the god, the first stage in temple buildings.

2. THE GOD'S HOME AMONG MEN.

It was the thought of the exaltedness of the god's abode that led to the construction of the first temples. Then came a time when man realized that his god was an important factor in his daily life, that his success or failure depended upon his loyalty to his god, and hence it became his duty to build him a house like his own, though more splendid and luxurious. Thus there grew up near the zikkurat the rectangular temple which developed in time to a whole community within the sacred walls. Already in the Old Empire in Egypt we notice the appearance of the low, rectangular temples at the foot of the pyramids, which gave rise to the most splendid monuments of antiquity.

The sacred chamber in the top story of the zikkurat, the chamber of the pyramid, receive their counterparts in the papakhu and the adytum, these oracles in which the emblems of the god were kept and the divine will was revealed. The Hebrew narrative tells us that from Horeb's peak were brought those words which contained the law of Yahweh, and the ark of the covenant reached finally its permanent home in the Holy of Holies. Thus the god found a home among men, the second stage in the temple buildings.

3. THE TERRACE TEMPLE.

Queen Hatshepsowet broke with the conventional style of temple buildings when she erected her sanctuary at Deir-el-Bahri. It is

regarded as an exception from the rule, which was not imitated in Egypt, but is exemplified by the architecture of Phœnicia and Cyprus. She built her temple on the mountain slope and made four large terrace-courts in front. In the glory and beauty of god's home among men, the exaltedness of his earlier home must not be forgotten. These two qualities must be combined, and what more fitting manifestation of this thought could be conceived than a temple that is approached from stage to stage, as in the olden time, and yet maintain the beauty and the splendor of the rectangular home? Hence we find in Solomon's Temple in Jerusalem the best and most complete type of Oriental shrines, the third stage in temple buildings.

First Stage.		Second Stage.			Third Stage.		
Assyria.	Egypt.	Assyria.	Egypt, Old Empire.	Egypt, New Empire.	Egypt, Deir-el-Bahri.	Phœnicia and Cyprus.	Solomon's Temple.
Zikkurat.	Pyramid.			Pylon.	Four Courts.	Lower Court.	People's Court.
		Court.	Court.	Peristyle.	Temple Proper.	Upper Court.	Priests' Court.
		Vestibule.	Vestibule.	Pylon.		Cella.	Vestibule.
		Naos.	Hall.	Hypostyle.			Holy place.
		Papakhu.		Adytum.			Holy of Holies.
		Chambers.	Chambers.	Chambers.			Chambers.

BIBLIOGRAPHY.

BAEDEKER, Egypt. Leipsic, 1898.

BENZINGER, Hebräische Archäologie.

BIRCH AND PINCHES, The Bronze Ornaments of the Palace Gates of Balawat, London, 1881.

BOTTA, Monuments de Niniveh.

CESNOLA, Cyprus.

Salaminia.

Corpus Inscriptionum Semiticarum, I : i.

DE SARZEC, Découvertes en Chaldée.

DE SAULCY, Histoire de l'art Judaique.

Voyage. Atlas.

DONALDSON, Architectura Numistica.

EBERS, Aegypten im Bild und Wort. Vol. II.

ENGEL, Kypros.

ERMAN, Life in Ancient Egypt.

EWALD, History of Israel, Vol. III.

FERGUSON, History of Architecture.

The Temples of Jerusalem.

FRIEDRICH, Die Ausgrabungen von Sendshirli, *Beiträge zur Assyriologie.* IV : 2.

Tempel und Palast Salomo's, Denkmäler Phönikischer Kunst, Innsbruck, 1887.

GREENE, H. B., Hebrew Rock Altars, *Biblical World*, 1897, Vol. IX, p. 332.

HILPRECHT, Old Babylonian Inscriptions.

HOMMEL, Geschichte Babyloniens und Assyriens.

HURLBUT, Article on Solomon's Temple, *Old and New Testament Student*, Vol. VII.

JASTROW, Religion of Babylonia and Assyria.

JENSEN, Kosmologie.

JOMARD, Description de l'Égypte, Vol. V.

JOSEPHUS, Antiquities.

KENT AND GOODSPEED, Chart of Biblical History, Chicago, 1895.

LAYARD, Discoveries in the Ruins of Niniveh and Babylon.

LEPSIUS, Denkmäler, III.

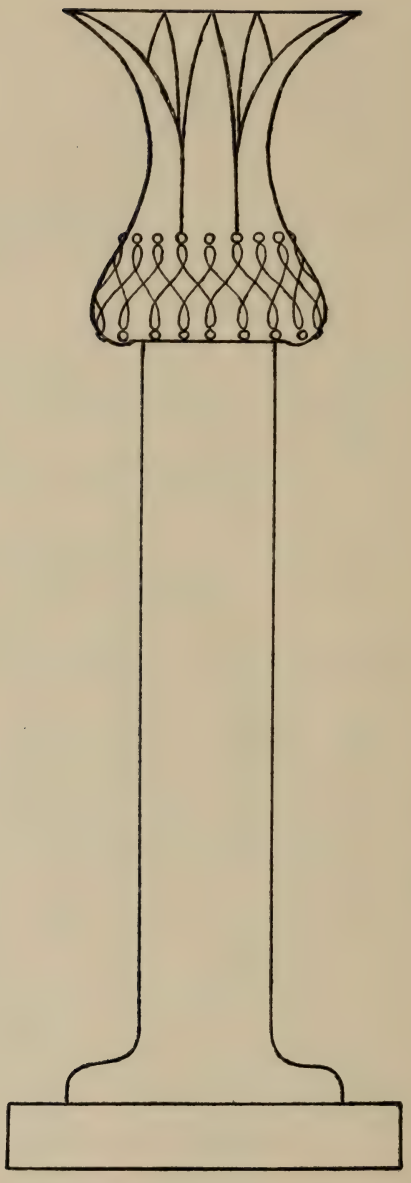
MASPERO, Manual of Egyptian Archæology.

MAX OHNEFALSCH-RICHTER, Kypros.

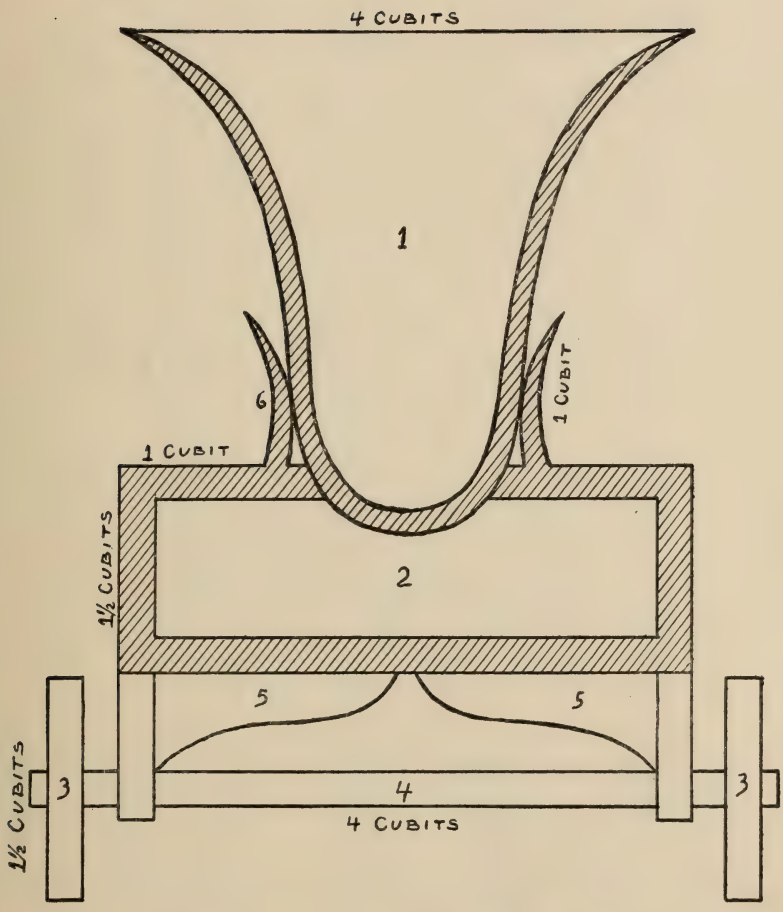
PETRIE, Pyramids and Temples of Gizeh.

PINCHES, List of Ass. Bab. Temples in the *Proc. of the Soc. of Bib. Archæology*, Vol. XXII, Part IX.

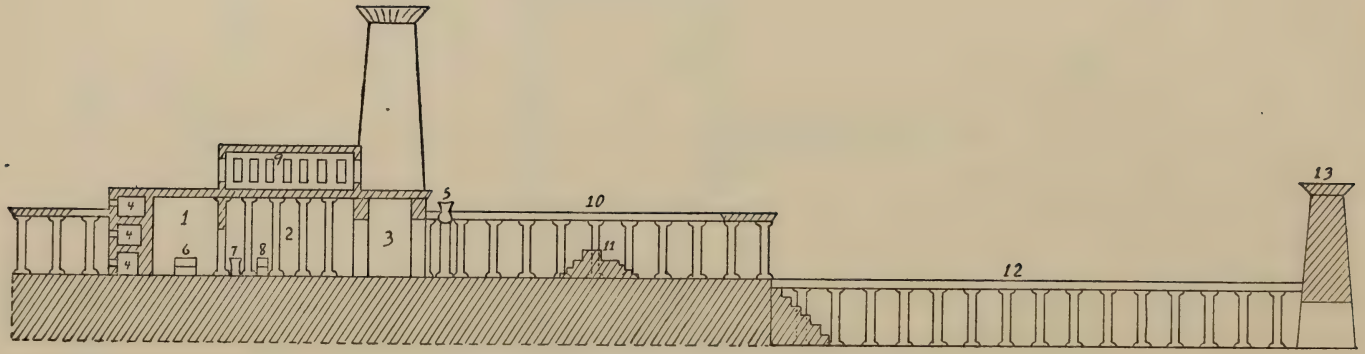
PLACE, Niniveh.
PERROT AND CHIPIEZ, History of Art in Ancient Egypt, 2 vols.
History of Art in Chaldea and Assyria, 2 vols.
History of Art in Phœnicia and Cyprus, 2 vols.
History of Art in Sardinia and Judea, 2 vols.
PETERS, Nippur, 2 vols.
RENAN, Mission en Phénécie.
RIEHM, Handwörterbuch des biblischen Altertums, 2d ed., Vol. II.
SCHICK, Die Stiftshütte, der Tempel in Jerusalem und der Tempelplatz der Jetztzeit.
ROBERTSON SMITH, Religion of the Semites.
STADE, Geschichte des Volkes Israel. Berlin, 1889.
STEINDORFF, in Baedeker's Egypt.
VOGÜÉ, Syrie Centrale Architecture Civile et Religieuse.
Le Temple de Jérusalem.
WINCKLER, Altorientalische Forschungen, Vol. III.
Geschichte Israels.



RESTORATION OF JACHIN OR BOAZ.

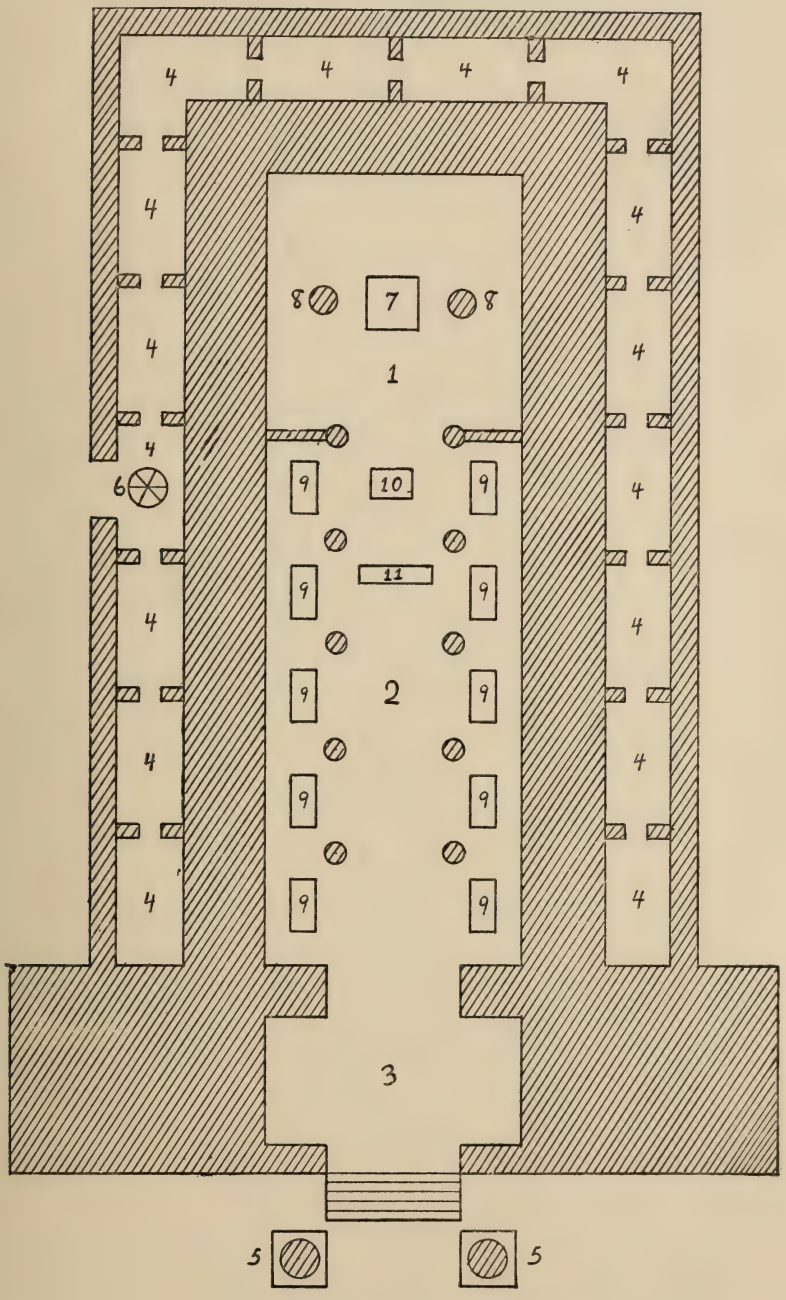


1. The laver.
2. The base.
3. The wheels.
4. The axle-tree.
5. The "undersetters" or cleats.
6. The pedestal.



CROSS-SECTION OF SOLOMON'S TEMPLE.

1. The Holy of Holies.
2. The Holy Place.
3. The vestibule.
4. The chambers.
5. The Jachin and Boaz.
6. The ark.
7. The altar of incense.
8. The table of shewbread.
9. The windows
10. The priests' court.
11. The Altar.
12. The people's court.
13. The pro-pylon.



PLAN OF SOLOMON'S TEMPLE.

1. The Holy of Holies.
2. The Holy Place.
3. The vestibule.
4. The chambers.
5. Jachin and Boaz.
6. The winding staircase.
7. The ark.
8. The cherubim.
9. The tables for the candlesticks.
10. The altar of incense.
11. The table of shewbread.

VITA.

I, EMANUEL SCHMIDT, was born in Hudiksvall, Sweden, on April 28, 1868. My parents were L. P. Anderson and Frederika Wilhelmina Schmidt. My earliest instruction I received in a private school in my native city, whereupon I entered Hudiksvall gymnasium and elementary school in the autumn of 1878, continuing until 1886, when I moved to the United States. After two years of study I graduated from Colgate Academy, Hamilton, N. Y., in 1890. In 1894 I graduated with A.B. degree from Colgate University. I then spent two years in Hamilton Theological Seminary, the Divinity School of Colgate University. In the autumn quarter of 1896 I entered the University of Chicago, and received the D.B. degree at the July convocation in 1898. From that time until the end of the winter quarter of 1902 I have continued my studies in the departments of Old Testament Literature and Exegesis and Egyptology.

I would acknowledge with gratitude my great indebtedness to my teachers, especially President W. R. Harper and Professors James H. Breasted, George S. Goodspeed, and Ira M. Price, of the Uuniversity of Chicago; Professor S. Burnham, of Colgate University; and particularly my brother, Professor Nathaniel Schmidt, now of Cornell University.